DVP-S525D/S725D

RMT-D108P/D111P

SERVICE MANUAL

South African Model
Middle and Near East Model

Self Diagnosis
Supported model

Photo: DVP-S725D

SPECIFICATIONS

CD/DVD player

Laser Semiconductor laser
Signal format system PAL/(NTSC)

Audio characteristics

Frequency response DVD (PCM 96 kHz): 2 Hz to 44 kHz (±1 dB)* (S525D)
DVD (PCM 96 kHz): 2 Hz to 44 kHz (±0.5 dB)* (S725D)
DVD (PCM 48 kHz): 2 Hz to 22 kHz (±0.5 dB)
CD: 2 Hz to 20 kHz (±0.5 dB)

Signal-to-noise ratio More than 110 dB (LINE OUT (AUDIO) connectors only) (S525D)
More than 110 dB (AUDIO OUT connector only) (S725D)

Harmonic distortion Less than 0.0025%

Dynamic range More than 100 dB (DVD)
More than 98 dB (CD)

Wow and flutter Less than detected value (±0.001% W PEAK)

Outputs and inputs

	Jack type	Output level	Load impedance
LINE OUT (AUDIO) (S525D)	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
AUIO OUT (S725D)	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm
DIGITAL OUT (COAXIAL)	Phono jack	0.5 Vp-p	75 ohms terminated
LINE OUT (VIDEO) (S525D)	Phono jacks	1.0 Vp-p	75 ohms, sync negative
VIDEO OUT (1, 2) (S725D)	Phono jacks	1.0 Vp-p	75 ohms, sync negative
S VIDEO OUT (S525D) S VIDEO OUT (1, 2) (S725D)	4-pin mini DIN	Y: 1.0 Vp-p C: 0.3 Vp-p (PAL) C: 0.286 Vp-p (NTSC)	75 ohms, sync negative 75 ohms terminated
COMPONENT VIDEO OUT (Y, CB/B-Y, CR/R-Y) (S725D)	phono jacks	Y: 1.0 Vp-p CB/B-Y, CR/R-Y: 0.7 Vp-p	75 ohms, sync negative 75 ohms
PHONES	Phone jack	12 mW	32 ohms
5.1CH OUTPUT	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms

General

Power requirements 220 – 240 V AC, 50/60 Hz

Power consumption 17 W (S525D)
22 W (S725D)

Dimensions (approx.) 430 × 95 × 305 mm (w/h/d) incl. projecting parts

Mass (approx.) 3.4 kg (S525D)
4.0 kg (S725D)

Operating temperature 5°C to 35°C

Operating humidity 5% to 90%

– Continued on next page –

CD/DVD PLAYER

MICROFILM

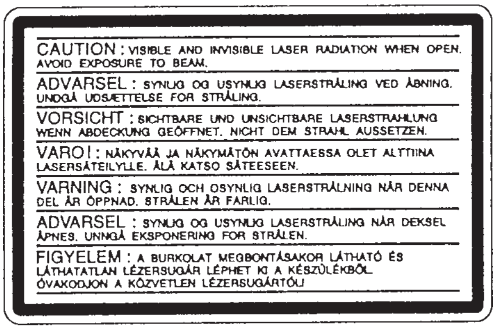
SONY®

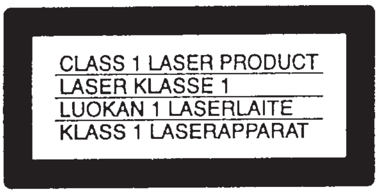
Supplied accessories

- Audio/Video connecting cord (1)
- S video cable (1)
- Remote commander (remote) RMT-D108P (1) (S525D)
- Remote commander (remote) RMT-D111P (1) (S725D)
- Size AA (R6) batteries (2)

DVP-S525D:
* The signals from LINE OUT (AUDIO) connectors and 5.1 ch L, R connectors are measured. When you play the PCM sound tracks with 96 kHz sampling frequency, the output signals from the DIGITAL OUT (OPTICAL, COAXIAL) are converted to 48 kHz (sampling frequency).
DVP-S725D:
* The signals from AUDIO OUT connectors and 5.1 ch L, R connectors are measured. When you play the PCM sound tracks with 96 kHz sampling frequency, the output signals from the DIGITAL OUT (OPTICAL, COAXIAL) are converted to 48 kHz (sampling frequency).

Design and specifications are subject to change without notice.





CLASS 3B LASER
LUOKAN 3B LASER
LASERKLASS 3B

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

CAUTION:
The use of optical instrument with this product will increase eye hazard.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

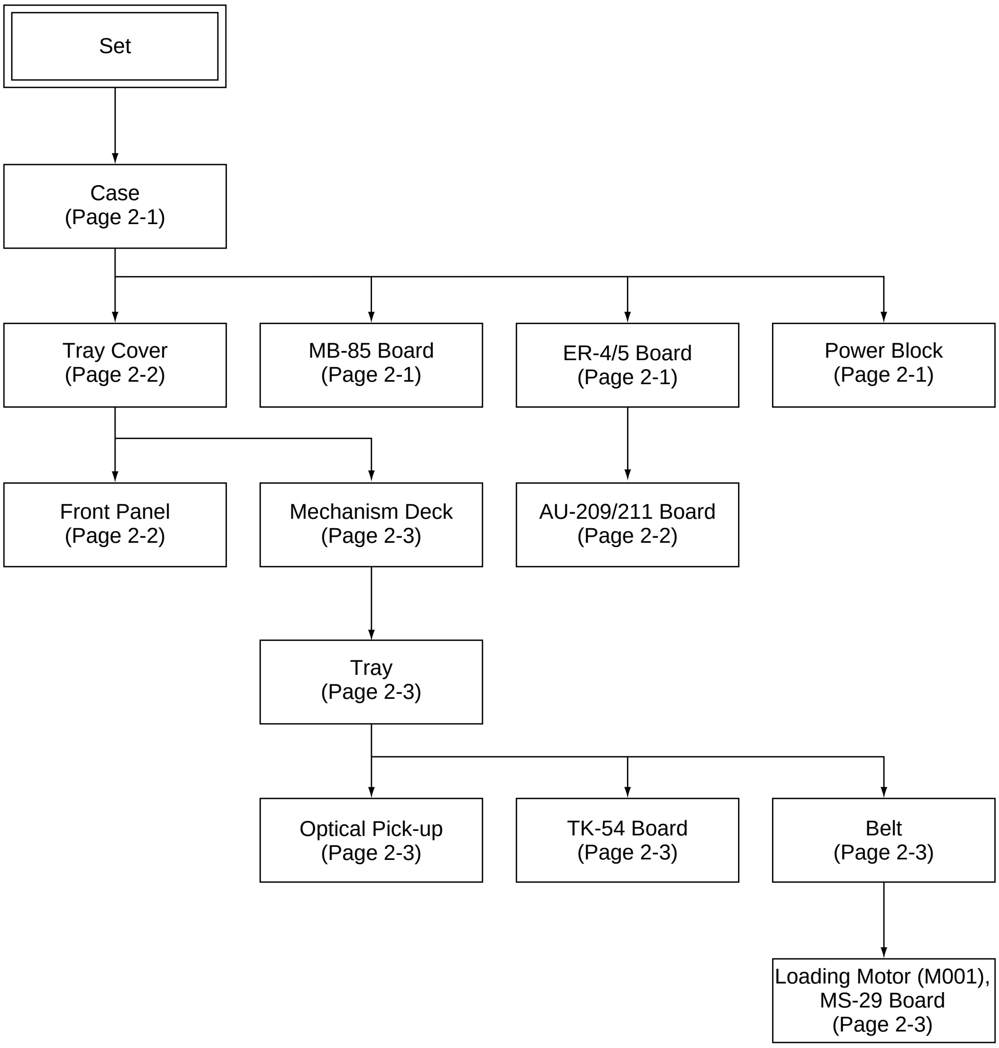
TABLE OF CONTENTS

Section	Title	Page
	Service Note	4
1.	GENERAL	
	Getting Started	1-1
	Playing Discs	1-4
	Using Various Functions with the Control Menu	1-6
	Settings and Adjustments	1-12
2.	DISASSEMBLY	
2-1.	Case Removal	2-1
2-2.	MB-85 Board Removal	2-1
2-3.	Power Block Removal	2-1
2-4.	ER-4/5 Board Removal	2-1
2-5.	AU-209 Board Removal (S525D)	2-2
2-6.	AU-211 Board Removal (S725D)	2-2
2-7.	Tray Cover Removal	2-2
2-8.	Front Panel Removal	2-2
2-9.	Mechanism Deck Removal	2-3
2-10.	Tray Removal	2-3
2-11.	Optical Pick-up Removal	2-3
2-12.	Belt, Loading Motor (M001), MS-29/TK-54 Board Removal	2-3
2-13.	Internal View	2-4
2-14.	Circuit Boards Location	2-5
3.	BLOCK DIAGRAMS	
3-1.	Overall Block Diagram	3-1
3-2.	RF/Servo Block Diagram	3-3
3-3.	Signal Process Block Diagram	3-5
3-4.	Video Block Diagram	3-7
3-5.	System Control Block Diagram	3-9
3-6.	Audio (1) Block Diagram	3-11
3-7.	Audio (2) Block Diagram	3-13
3-8.	Audio (3) Block Diagram	3-15
3-9.	Interface Control Block Diagram	3-17
3-10.	Power Block Diagram	3-19
4.	PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS	
4-1.	Frame Schematic Diagrams	4-3
	FRAME (1) Schematic Diagram	4-3
	FRAME (2) Schematic Diagram	4-5
	FRAME (3) Schematic Diagram	4-7
4-2.	Printed Wiring Boards and Schematic Diagrams	4-9
	TK-54 Printed Wiring Board	4-9
	TK-54 Schematic Diagram	4-13
	MS-29 Printed Wiring Board and Schematic Diagram	4-15
	MB-85 Printed Wiring Board	4-17
	MB-85 (AV DECODER) Schematic Diagram	4-21
	MB-85 (SDRAM) Schematic Diagram	4-23
	MB-85 (SERVO DSP) Schematic Diagram	4-25
	MB-85 (DRIVE) Schematic Diagram	4-27
	MB-85 (ARP) Schematic Diagram	4-29
	MB-85 (SYSTEM CONTROL) Schematic Diagram	4-31
	MB-85 (HGA) Schematic Diagram	4-33
	MB-85 (CLOCK GENERATOR, AUDIO DSP, V EQ/NR) Schematic Diagram	4-35
	MB-85 (DAC) Schematic Diagram	4-37
	MB-85 (BIAS) Schematic Diagram	4-39
	AU-211 Printed Wiring Board	4-41
	AU-211 (AUDIO) Schematic Diagram	4-45
	AU-211 (VIDEO BUFFER) Schematic Diagram	4-47
	AU-209 Printed Wiring Board	4-49
	AU-209 (AUDIO) Schematic Diagram	4-51
	AU-209 (VIDEO BUFFER) Schematic Diagram	4-53
	ER-4 Printed Wiring Board	4-55
	ER-4 (EURO AV1) Schematic Diagram	4-57
	ER-4 (EURO AV2) Schematic Diagram	4-59
	ER-5 Printed Wiring Board	4-61
	ER-5 (EURO AV1) Schematic Diagram	4-65
	ER-5 (EURO AV2) Schematic Diagram	4-67
	FL-100 Printed Wiring Board	4-69
	FL-98 Printed Wiring Board	4-73
	FL-98/100 (FUNCTION SWITCH) Schematic Diagram	4-75
	FL-98/100 (IF CON) Schematic Diagram	4-77
	SW-314/316 Printed Wiring Boards	4-79
	FR-147/149 Printed Wiring Boards	4-80
	SW-314/316, FR-147/149 Schematic Diagram	4-81
	HP-108/110 Printed Wiring Boards and Schematic Diagram	4-83
	RY-12 Printed Wiring Board and Schematic Diagram	4-85
	HS-030SH Printed Wiring Board	4-87
	HS-030SH Schematic Diagram	4-89
5.	IC PIN FUNCTION DESCRIPTION	
5-1.	System Control Pin Function (MB-85 Board IC202)	5-1
6.	TEST MODE	
6-1.	General Description	6-1
6-2.	Starting Test Mode	6-1
6-3.	Syscon Diagnosis	6-1
6-4.	Drive Auto Adjustment	6-5
6-5.	Drive Manual Operation	6-7
6-6.	Mecha Aging	6-9
6-7.	Emergency History	6-9
6-8.	Version Information	6-10
6-9.	Video Level Adjustment	6-10
6-10.	If Con Self Diagnostic Function	6-11
7.	ELECTRICAL ADJUSTMENT	
7-1.	Power Supply Adjustment	7-1
1.	HS030SH Board	7-1
7-2.	Adjustment of Video System	7-2
1.	Video Level Adjustment	7-2
2.	S-terminal Output Check	7-2
3.	Checking Component Video Output B-Y	7-2
4.	Checking Component Video Output R-Y	7-2
5.	Checking Component Video Output Y	7-3
6.	Checking RGB Output R	7-3
7.	Checking RGB Output G	7-3
8.	Checking RGB Output B	7-3
9.	Checking S Video output S-C	7-4
7-3.	Adjustment Related Parts Arrangement	7-6
8.	REPAIR PARTS LIST	
8-1.	Exploded Views	8-1
8-1-1.	Case Assembly (S525D)	8-1
8-1-2.	Case Assembly (S725D)	8-2
8-1-3.	Front Panel Assembly	8-3
8-1-4.	Chassis Assembly	8-4
8-1-5.	Mechanism Deck Assembly	8-6
8-2.	Electrical Parts List	8-7

SERVICE NOTE

1. DISASSEMBLY

- This set can be disassembled in the order shown below.



2. NOTE ON REMOVE THE CASE

1) Remove seven screws. (See Fig. 1)
2) Open the side of case. (See Fig. 1)
3) Remove the case as lift straight. (See Fig. 1)

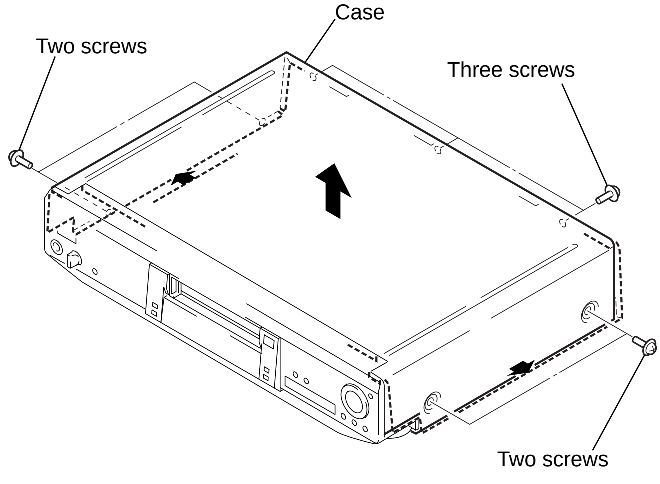


Fig. 1

3. DISC REMOVAL PROCEDURE (at POWER OFF)

1) Insert a tapering driver into the aperture of the unit bottom, and move the lever of chuck cam in the direction of the arrow Ⓐ. (See Fig. 2)
2) Draw out the tray in the direction of the arrow Ⓑ, and remove a disc. (See Fig. 2)

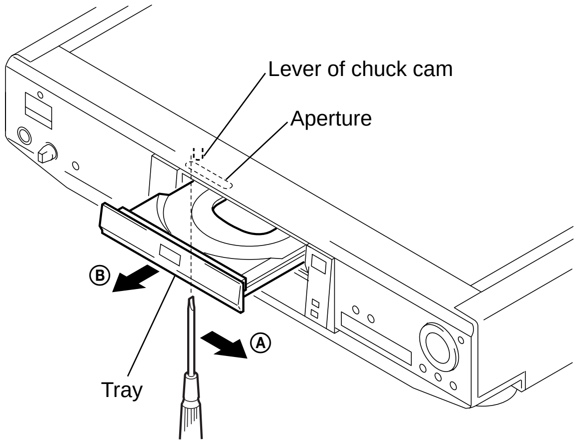


Fig. 2

4. HOW TO SERVICE MB-85 BOARD

1) Remove the case from the set. (Refer to 2-1)
2) Remove the MB-85 board. (Refer to 2-2)
3) Set the MB-85 board as shown in Fig. 3.
   Note: Do not disconnect wiring, except FMA-7/8/9.

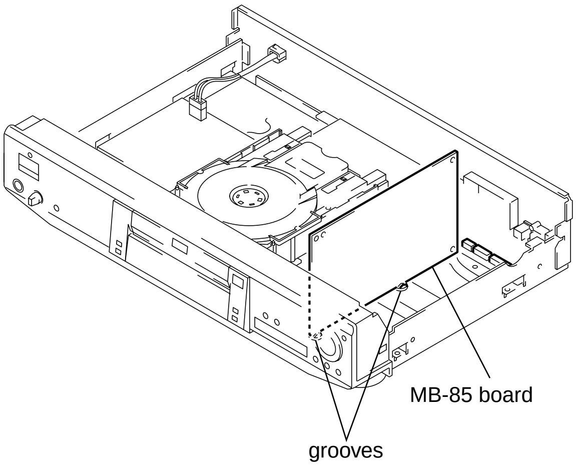


Fig. 3

SECTION 1
GENERAL

This section is extracted from DVP-S725D instruction manual (3-866-153-21).

About This Manual

Conventions
- Instructions in this manual describe the controls on the player. You can also use the controls on the remote if they have the same or similar names as those on the player.
- The icons on the right are used in this manual:

Icon	Meaning
(remote icon)	Indicates that you can use only the remote to do the task.
(tip icon)	Indicates tips and hints for making the task easier.
DVD	Indicates the functions for DVD VIDEOs.
VIDEO CD	Indicates the functions for VIDEO CDs.
CD	Indicates the functions for Audio CDs.

This Player Can Play the Following Discs

	DVD VIDEOs		VIDEO CDs		Audio CDs	
Disc logo	DVD VIDEO		COMPACT disc DIGITAL VIDEO		COMPACT disc DIGITAL AUDIO TEXT	
Contents	Audio + Video		Audio + Video		Audio	
Disc size	12 cm	8 cm	12 cm	8 cm	12 cm	8 cm (CD single)
Play time	About 4 h (for single-sided DVD)/ about 8 h (for double-sided DVD)	About 80 min. (for single-sided DVD)/ about 160 min. (for double-sided DVD)	74 min.	20 min.	74 min.	20 min.

"DVD VIDEO" logo is a trademark.

When you play an NTSC disc, this player outputs the video signal in the NTSC system only. In this case, if your TV is a PAL system mode, the picture becomes noisy.

Region code of DVDs you can play on this unit

Your DVD player has a region code printed on the back of the unit and will only play DVDs that are labeled with identical region codes.

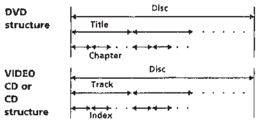
DVDs labeled ALL will be also played on this unit.

If you try to play any other DVD, the message "Playing this disc prohibited by area limits." will appear on the TV screen.

Depending on the DVD, no region code indication may be labeled even though playing the DVD is prohibited by the area limits.

Note on playback operations of DVDs and VIDEO CDs
Some playback operations of DVDs and VIDEO CDs may be intentionally fixed by software producers. Since this player plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also refer to the instructions supplied with the DVDs or VIDEO CDs.

Terms for discs
- Title
  The longest sections of a picture or a music piece on a DVD; a movie, etc., for a picture piece on a video software; or an album, etc., for a music piece on an audio software. Each title is assigned a title number enabling you to locate the title you want.
- Chapter
  Sections of a picture or a music piece that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want. Depending on the disc, no chapters may be recorded.
- Track
  Sections of a picture or a music piece on a VIDEO CD or a CD. Each track is assigned a track number enabling you to locate the track you want.



- Index (CD) / Video Index (VIDEO CD)
  A number that divides a track into sections to easily locate the point you want on a VIDEO CD or a CD. Depending on the disc, no indexes may be recorded.
- Scene
  On a VIDEO CD with PBC functions, the menu screens, moving pictures and still pictures are divided into sections called "scenes." Each scene is assigned a scene number enabling you to locate the scene you want.

Note on PBC (Playback Control) (VIDEO CDs)
This player conforms to Ver. 1.1 and Ver. 2.0 of VIDEO CD standards. You can enjoy two kinds of playback according to the disc type.

Disc type	You can
VIDEO CDs without PBC functions (Ver. 1.1 discs)	Enjoy video playback (moving pictures) as well as music.
VIDEO CDs with PBC functions (Ver. 2.0 discs)	Play interactive software using menu screens displayed on the TV screen (PBC Playback), in addition to the video playback functions of Ver 1.1 discs. Moreover, you can play high-resolution still pictures, if they are included on the disc.

Discs that the player cannot play
The player cannot play discs other than the ones listed in the table on page 4. CD-R, CD-ROMs including PHOTO CDs, data sections in CD-EXTRAs, DVD-ROMs etc., cannot be played.

When playing DTS*-encoded CDs, excessive noise will be heard from the analog stereo outputs. To avoid possible damage to the audio system, the consumer should take proper precautions when the analog stereo outputs of the DVD player are connected to an amplification system. To enjoy DTS Digital Surround™ playback, an external 5.1-channel DTS Digital Surround™ decoder system must be connected to the digital output of the DVD player.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

* "DTS" is a trademark of Digital Theater Systems, Inc.

Precautions

On safety
- Caution – The use of optical instruments with this product will increase eye hazard.
- Should any solid object or liquid fall into the cabinet, unplug the player and have it checked by qualified personnel before operating it any further.

On power sources
- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use the player for a long time, be sure to disconnect the player from the wall outlet. To disconnect the AC power cord (mains lead), grasp the plug itself; never pull the cord.
- Should the AC power cord (mains lead) need to be changed, have it done at a qualified service shop only.

On placement
- Place the player in a location with adequate ventilation to prevent heat build-up in the player.
- Do not place the player on a soft surface such as a rug that might block the ventilation holes on the bottom.
- Do not place the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.

On operation
- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the player. Should this occur, the player may not operate properly. In this case, remove the disc and leave the player turned on for about half an hour until the moisture evaporates.

On adjusting volume
- Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

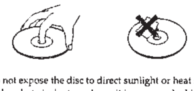
On cleaning
- Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

IMPORTANT NOTICE
Caution: The enclosed DVD player is capable of holding a still video image or On screen display image on your television screen indefinitely. If you leave the still video image or On screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are very susceptible.

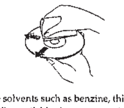
Notes on Discs

On handling discs
- To keep the disc clean, handle the disc by its edge. Do not touch the surface.
- Do not stick paper or tape on the disc.
- If there is glue (or a similar substance) on the disc, remove the glue completely before using the disc.



- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as there can be considerable rise in temperature inside the car.
- After playing, store the disc in its case.

On cleaning
- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.



- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.

Getting Started

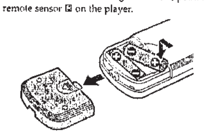
This section describes how to hook up the CD/DVD player to a TV (with audio/video input jacks) and/or an AV receiver (amplifier). You cannot connect this player to a TV which does not have a video input connector. Be sure to turn off the power of each component before making the connections.

Unpacking

Check that you have the following items:
- Audio/video connecting cord (1)
- S video cord (1)
- Remote commander (remote) RMT-D111P (1)
- R6 (size AA) batteries (2)

Inserting batteries into the remote

You can control the player using the supplied remote. Insert two R6 (size AA) batteries by matching the + and – on the batteries. When using the remote, point it at the remote sensor on the player.



You can control TVs and AV receivers using the supplied remote
See page 63.

Notes
- Do not leave the remote in an extremely hot or humid place.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you will not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

TV Hookups

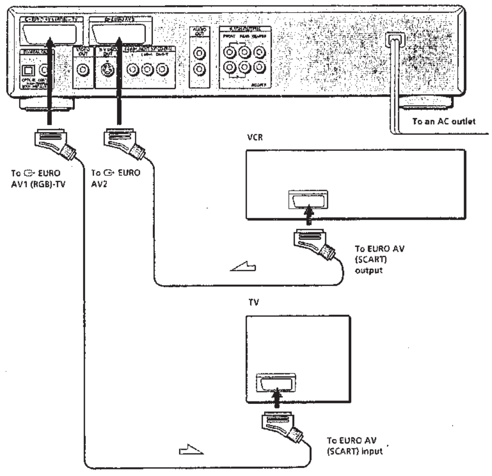
This connection is for listening to the sound through TV speakers (2ch – L,R). Refer to the instructions supplied with the component to be connected. You cannot connect this player to a TV without an EURO AV (SCART) connector or a video input connector.

Required cords

EURO-AV (SCART) connecting cord (not supplied) (2)
Be sure to make connections firmly to avoid hum and noise. Refer to the instructions supplied with the TV to be connected.

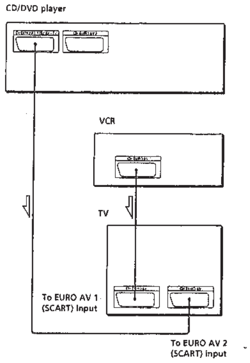
Notes
- When you set "EURO AV OUT" to "S VIDEO" or "RGB" under "CUSTOM SETUP" in the setup display, use the EURO AV (SCART) connecting cord conformed to each signal.
- When you connect using the EURO-AV connecting cord, confirm that the TV corresponds to S VIDEO or RGB. Refer to the instructions supplied with the TV to be connected.

CD/DVD player



⇨ : Signal flow

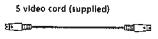
If your TV has two EURO AV (SCART) connectors



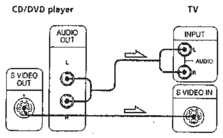
If your TV has no EURO AV (SCART) connectors
You can connect the player to a TV (with audio/video input jacks) using the supplied audio/video connecting cord. If your TV has an S video input connector, connect the component via the S VIDEO OUT connector using the S video cord (supplied) instead of the video connecting cord. You will get a better picture. When connecting the cords, be sure to match the color-coded cord to the appropriate jacks on the components: Yellow (video) to Yellow, Red (right) to Red and White (left) to White.

Audio/Video connecting cord (supplied)

S video cord (supplied)

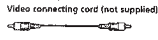


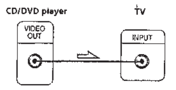
■ **To listen to the sound through TV speakers**



■ **If your TV has no S video input connector**
Connect the component via the VIDEO INPUT connector using the video connecting cord (not supplied) instead of the S video cord.

Video connecting cord (not supplied)

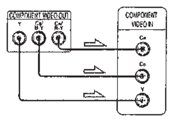




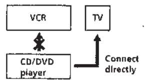
If you connect the player to a monitor or projector having component video input connectors that conform to output signals from the COMPONENT VIDEO OUT (Y, CB/B-Y, CR/R-Y) connectors on the player

Connect the component via the COMPONENT VIDEO OUT connectors using three video connecting cords (not supplied) of the same kind. You will get a better picture.

In this case, set "EURO AV OUT" in "CUSTOM SETUP" to "VIDEO" or "S VIDEO" in the setup display, and set "COMPONENT OUT" to "ON." (page 54)



Notes
- When you set "EURO AV OUT" in "CUSTOM SETUP" to "RGB", you cannot select the item "COMPONENT OUT" in "CUSTOM SETUP."
- Refer to the instructions supplied with the component to be connected.
- Do not connect this player to a video deck. If you view the pictures on your TV after making the connections shown below, a picture noise may appear.



- Depending on the TV or receiver (amplifier), sound distortion may occur because the audio output level is high. In this case, set "AUDIO ATT" in "AUDIO SETUP" to "ON" in the setup display. For details, see page 58.
- If you cannot view the pictures from a VCR through this player which is connected to a TV with RGB, set ⊖1 to ⊖(Audio/Video) on your TV. When you select ⊖(RGB), the TV cannot receive the signal from the VCR.
- If you want to enjoy the picture with RGB signal via EURO AV 1 (RGB) connector, set "COMPONENT OUT" in the "CUSTOM SETUP" to "OFF," then set "EURO AV OUT" to "RGB" in the setup display. For details, see page 54.
- If you want to use SmartLink function of a VCR, connect the VCR to a TV with the connector conformed to SmartLink function and connect the CD/DVD player to the TV with another connector.
- When you connect the player to a monitor or projector via only the COMPONENT VIDEO OUT connectors, do not select "OFF" in "COMPONENT OUT" under "CUSTOM SETUP." If you select "OFF" in this case, the picture may not appear.

Setups for the player

Some setups are necessary for the player depending on the TV or other components to be connected.
Use the setup display to change the various settings.
For details on using the setup display, see page 49.

- **To connect the player to a wide-screen TV**
  In the setup display, set "TV TYPE" in "SCREEN SETUP" to "16:9" (default setting). For details, see page 53.
- **To connect the player to a normal TV**
  In the setup display, set "TV TYPE" in "SCREEN SETUP" to "4:3 LETTER BOX" or "4:3 PAN SCAN." For details, see page 53.
- **To connect the player to a TV or VCR via EURO AV connector that conforms to the S video signals or RGB signals**
  In the setup display, set "EURO AV OUT" in "CUSTOM SETUP" to "S VIDEO" or "RGB." For details, see page 54.
- **To connect the player to a monitor or projector with component video input connectors that conform to output signals from the COMPONENT VIDEO OUT (Y, CB/B-Y, CR/R-Y) connectors on the player**
  In the setup display, set "COMPONENT OUT" in "CUSTOM SETUP" to "ON." This is default setting. For details, see page 54.

This player conforms to the PAL color system. When you play a disc recorded in the NTSC color system, the player outputs the video signal or the setup display etc. in the NTSC color system and the picture may not appear on the TV screen. In this case, open the disc tray and remove the disc.

Receiver (Amplifier) Hookups

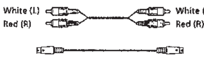
Getting Started

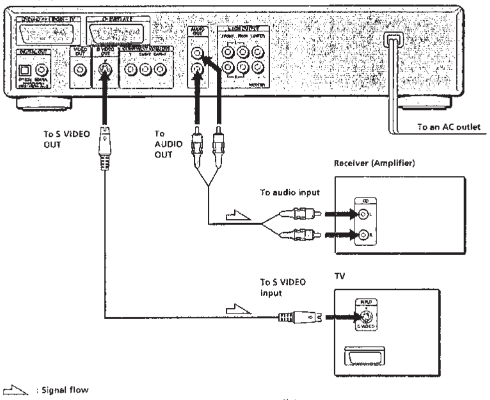
This connection is for listening to the sound through speakers connected to a receiver (amplifier such as an integrated stereo amplifier, a receiver having a built-in Dolby Pro Logic decoder, etc.). Refer to the instructions supplied with the component to be connected.
You can enjoy 5.1 channel surround sound by connecting a receiver (amplifier) with 5.1 channel inputs. See page 36.

You can enjoy surround when connecting front speakers only
You can use 3D sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers (Virtual Enhanced Surround). For details, see page 36.

Required cords

Audio connecting cord (not supplied) (1)
S video cord (supplied) (1)
When connecting the cords, be sure to match the color-coded cord to the appropriate jacks on the components: Red (right) to Red and White (left) to White. Be sure to make connections firmly to avoid hum and noise.



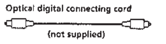


Note
You cannot enjoy the picture with S video signal if your TV is not conformed to the S video signal. When your TV does not have S VIDEO input, connect the component via the VIDEO INPUT connector using the video connecting cord (not supplied) instead of the S video cord. For details, see page 9.
Refer to the instructions supplied with your TV.

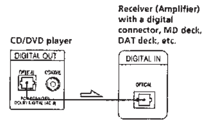
If you have a digital component such as a receiver (amplifier) with a digital connector, DAT or MD

Connect the component via the DIGITAL OUT OPTICAL or COAXIAL connector using an optical or coaxial digital connecting cord (not supplied).
When you play a DVD, set "DIGITAL OUT" in "AU 'IO SETUP" to "ON" and then set "DOLBY DIGITAL" to "D-PCM", "MPEG" to "PCM" and "DTS" to "OFF" in the setup display. (page 59)

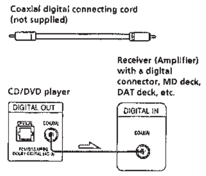
■ When using an optical digital connecting cord



Take off the cap and plug in the optical digital connecting cord.



■ When using a coaxial digital connecting cord



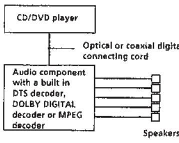
Notes
- Refer to the instructions supplied with the component to be connected.
- You cannot make digital audio recordings of discs recorded in multi-channel surround format directly using an MD deck or DAT deck.

When you make the connections above, do not set "DOLBY DIGITAL" to "DOLBY DIGITAL", "MPEG" to "MPEG" and "DTS" to "ON." If you do, a loud noise will suddenly come out from the speakers, affecting your ears or causing the speakers to be damaged.

If you have an audio component with a built in DTS decoder, Dolby Digital decoder or MPEG decoder

Connect the component via the DIGITAL OUT OPTICAL or COAXIAL connector using an optical or coaxial digital connecting cord (not supplied).

- ■ **When you play a DVD or CD that are recorded in DTS format**
  Set "DIGITAL OUT" in "AUDIO SETUP" to "ON" and then set "DTS" to "ON" in the setup display. (page 59)
- ■ **When you play a DVD that is recorded in Dolby Digital format**
  Set "DIGITAL OUT" in "AUDIO SETUP" to "ON" and then set "DOLBY DIGITAL" to "DOLBY DIGITAL" in the setup display. (page 59)
- ■ **When you play a DVD that is recorded in MPEG format**
  Set "DIGITAL OUT" in "AUDIO SETUP" to "ON" and then set "MPEG" to "MPEG" in the setup display. (page 59)



Notes
- Refer to the instructions supplied with the component to be connected.
- **When you do not connect an audio component with a built in DTS decoder, do not set "DTS" to "ON."**
- **When you do not connect an audio component with a built in DOLBY DIGITAL decoder, do not set "DOLBY DIGITAL" to "DOLBY DIGITAL."**
- **When you do not connect an audio component with a built in MPEG decoder, do not set "MPEG" to "MPEG."**

Setups for the player

Some setups are necessary for the player depending on the components to be connected.
Use the setup display to change the various settings.
For details on using the setup display, see page 49.

- **To listen to the sound through speakers connected to a receiver (amplifier) having a digital connector or to output the sound to a digital component such as a DAT or MD deck**
  When you play a DVD, set "DIGITAL OUT" in "AUDIO SETUP" to "ON" and then set "DOLBY DIGITAL" to "D-PCM," "MPEG" to "PCM" and "DTS" to "OFF" in the setup display (page 59). These are the default settings.

Getting Started

5.1 Channel Surround Hookups

Getting Started

Some DVDs have a sound track with up to 5.1 channels recorded in Dolby* Digital (AC-3) or MPEG AUDIO format. Using a receiver (amplifier) having 5.1 channel inputs and the 5 (+1) speakers, you can enjoy more real audio presence in the comfort of your own home.
"5 channel" stands for the 2 front speakers (Left and Right), 2 rear speakers (Left and Right) and 1 center speaker. The "0.1 channel" (+1) stands for the subwoofer which outputs the bass.
Even if you have fewer than 5 (+1) speakers, the player distributes the output signal to the speakers appropriately.
This player has VIRTUAL 3D SURROUND mode.
You can use the 3D sound imaging to shift the sound of the rear speakers away from the actual speaker position (VIRTUAL REAR SHIFT) or to create 3 sets of virtual rear speakers from 1 set of actual rear speakers (VIRTUAL MULTI REAR). For details on the VIRTUAL 3D SURROUND mode, see page 36.

Note
When a DVD has a sound track with 7.1 channels recorded in MPEG AUDIO format, the output audio signals are mixed down to 5.1 channels.

Speaker placement

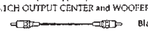
For the best possible surround sound, we recommend the following conditions.
- Use higher performance speakers.
- Use rear and center speakers that match your front speakers in size and performance.
- All speakers should be the same distance from the listening position.
- Place the subwoofer between the front (L, R) speakers if possible.

Note
Do not place the center or rear speakers farther away from the listening position than the front speakers.

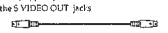
Required cords

Audio cords (not supplied)
Two for the 5.1CH OUTPUT FRONT and REAR jacks

Monaural audio cords (not supplied)
Two for the 5.1CH OUTPUT CENTER and WOOFER jacks



S video cord (supplied)
One for the S VIDEO OUT jacks



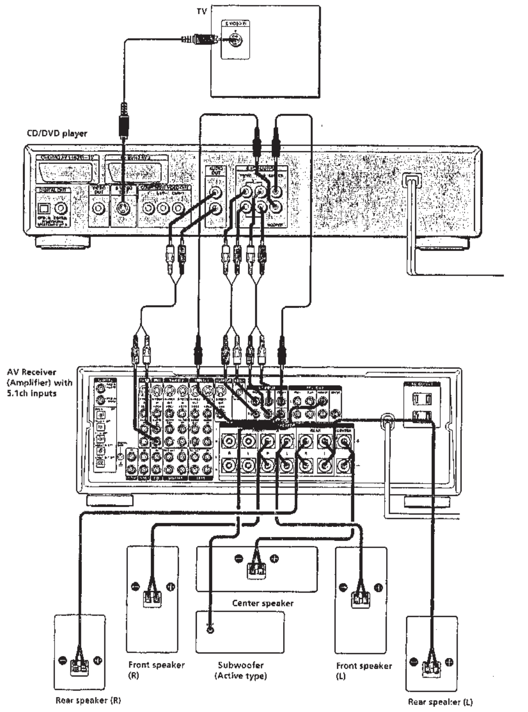
Notes
- Do not connect the power cord to an AC outlet or press the POWER switch before completing all connections.
- The cord connectors should be fully inserted into the jacks. Loose connection may cause hum and noise.
- Jacks and plugs of the connecting cords are color-coded as follows:
  Red jacks and plugs: Right audio channel
  White jacks and plugs: Left audio channel
  You can use either red or white cables to connect the center speaker and subwoofer.
- When you connect the component via the DIGITAL OUT OPTICAL or COAXIAL connector using an optical or coaxial digital connecting cord (not supplied), see page 13.

Setups for the player

Some setups are necessary for the player depending on the components to be connected.
Use the setup display or the Control Menu display to change the various settings.
For details on using the setup display, see page 49.
For details on enjoying Digital Cinema Sound, see page 36.

- **To enjoy Dolby Digital or MPEG AUDIO surround sound by connecting the player to a receiver (amplifier) with 5.1 ch Inputs**
  Set each speaker position or distance, etc. See page 61.

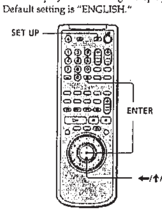
* Manufactured under license from Dolby Laboratories.
"Dolby", "AC-3", "Pro Logic" and the double-D symbol DD are trademarks of Dolby Laboratories.
Confidential Unpublished Works. ©1992-1997 Dolby Laboratories, Inc. All rights reserved.



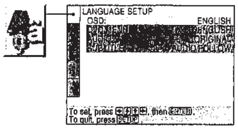
Getting Started

Selecting the Language for On-Screen Display

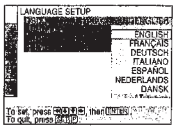
You can select the language for the setup display, the Control Menu display or the messages displayed on the screen. Default setting is "ENGLISH."



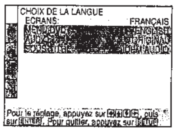
1 Press SET UP and select "LANGUAGE SETUP" using ↑/↓, and then press ENTER.



2 Select "OSD" using ↑/↓, then press → or ENTER.



3 Select "FRANÇAIS" using ↑/↓, then press ENTER.



To cancel using the setup display on the way
Press SET UP.

Note
The languages you can select are the ones displayed in step 2. For details, see page 52.

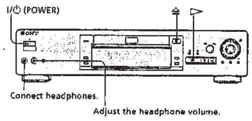
Playing Discs

This chapter describes how to play a DVD/CD/VIDEO CD.

This player conforms to the PAL color system. When you play a disc recorded in the NTSC color system, the player outputs the video signal or the setup display etc. in the NTSC color system and the picture may not appear on the TV screen. In this case, open the disc tray and remove the disc.

Playing Discs DVD VIDEO CD CD

Depending on the DVD or VIDEO CD, some operations may be different or restricted. Refer to the instructions supplied with your disc.

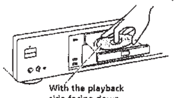


1 Make settings on your TV.
Turn on the TV and select the video input so that you can view the pictures from this player.

When using a receiver (amplifier)
Turn on the receiver (amplifier) and select the appropriate position so that you can listen to the sound from this player.

2 Press I/⏻ (POWER) to turn on the player.
The indicator (red) above the I/⏻ (POWER) button changes to green and the front panel display lights up.

3 Press ⏏, and place the disc on the disc tray.

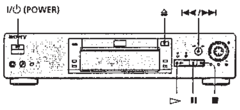


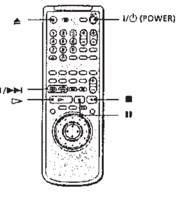
4 Press ▷.
The disc tray closes, and the player starts playback (Continuous Play). Adjust the volume on the TV or the receiver (amplifier).

After following Step 4
■ When playing a DVD
A DVD menu or title menu may appear on the TV screen (see page 21).
■ When playing a VIDEO CD
The menu screen may appear on the TV screen depending on the VIDEO CD. You can play the disc interactively, following the instructions on the menu screen. (PBC Playback, see page 22.)

You can turn on the player using the remote
Press I/⏻ (POWER) when the indicator above the I/⏻ (POWER) button on the front panel is lit in red.

Notes
- If you leave the player or the remote in pause or stop mode for 15 minutes, the screen saver image appears automatically. To make the screen saver image go away, press ▷. (If you want to set the screen saver function to off, see page 53.)
- The indicator above the I/⏻ (POWER) button lights up in red when the power is turned off.
- If you don't operate the player or the remote for more than 30 minutes when a disc is not being played, the power is automatically turned off. (Auto Power Off function)



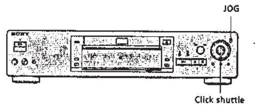


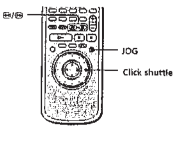
To	Operation
Stop	Press ■.
Pause	Press ❚❚.
Resume play after pause	Press ❚❚ or ▷.
Go to the next chapter, track or scene in continuous play mode	On the player: Turn |◀◀/▶▶| clockwise to select the chapter and then press |◀◀/▶▶|. On the remote: Press ▶▶|.
Go back to the preceding chapter, track or scene in continuous play mode	On the player: Turn |◀◀/▶▶| counterclockwise to select the chapter and then press |◀◀/▶▶|. On the remote: Press |◀◀.
Stop play and remove the disc	Press ⏏.

You can play discs in various modes such as Program Play using the on-screen menu (Control Menu). For operations of Control Menu, see page 25.

Playing at Various Speeds/Frame by Frame DVD VIDEO CD CD

Using the click shuttle and the JOG button/indicator, you can play back a DVD/CD/VIDEO CD at various speeds or frame by frame. Each time you press JOG, it changes between shuttle mode and jog mode.



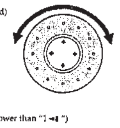


To change the playback speed (Shuttle mode)

Turn the click shuttle. The playback speed changes depending on the turning direction and angle as follows:

When you play back a DVD

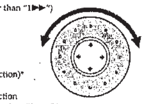
2▶▶ Fast forward (about 30 times the normal speed)
↕
1▶▶ Fast forward (about 10 times the normal speed)
↕
×2▶ (about twice the normal speed)
↕
▶ (Normal speed)
↕
1❚▶ Slow (playback direction)
↕
2❚▶ Slow (playback direction – slower than "1❚▶")
↕
❚❚ Pause
↕
2◀❚ Slow (opposite direction – slower than "1◀❚")
↕
1◀❚ Slow (opposite direction)
↕
×2◀ (about twice the normal speed)
↕
1◀◀ Fast rewind (about 10 times the normal speed)
↕
2◀◀ Fast rewind (about 30 times the normal speed)



If you turn the click shuttle quickly, the playback speed goes to 2▶▶/2◀◀ at once.

When you play back a CD/VIDEO CD

2▶▶ Fast forward (Faster than "1▶▶")
↕
1▶▶ Fast forward
↕
▶ (Normal speed)
↕
1❚▶ Slow (playback direction)*
↕
2❚▶ Slow (playback direction – slower than "1❚▶")*
↕
❚❚ Pause
↕
1◀◀ Fast rewind
↕
2◀◀ Fast rewind(Faster than "1◀◀")



* VIDEO CD Only

If you turn the click shuttle quickly, the playback speed goes to 2▶▶/2◀◀ at once.

To return to continuous play
Press ▷.

To search for the picture using the button on the remote
Keep pressing ⊖ or ⊕. The playback speed is same as 1◀◀ or 1▶▶ when using the click shuttle.

Note
Depending on the DVD/VIDEO CD, you may not be able to do some of the operations described.

To play the disc frame by frame changing the playback speed (Jog mode) DVD VIDEO CD

1 Press JOG.
JOG lights up during jog mode. When you press JOG on the player, it pauses.

2 Turn the click shuttle.
Depending on the turning speed, the playback goes to frame-by-frame in the direction that the click shuttle is turned. If you turn the click shuttle with constant speed for a while, the playback speed goes to slow or normal.

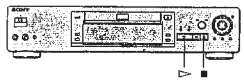
To return to Continuous Play
Press ▷.

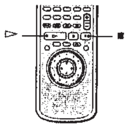
Notes
- The JOG indicator shows the mode of the corresponding click shuttle. For example, when the JOG indicator on the remote is not lit, the remote click shuttle will remain in the shuttle mode even if the indicator on the player is lit.
- If you don't operate the click shuttle for about 20 seconds after pressing JOG, it returns to shuttle mode on the remote. On the player, it stays in jog mode.

Playing Discs

Resuming Playback from the Point Where You Stopped the Disc (Resume Play) DVD VIDEO CD CD

The player stores the point where you stopped the disc and if "RESUME" appears on the front panel display. You can resume playback from that point.
As long as you do not open the disc tray, Resume Play is available even if you turn the power off.





1 While playing a disc, press ■ to stop playback.
"RESUME" appears in the front panel display and "When playing next time, disc restarts from point you stopped." appears on the TV screen.
If "RESUME" does not appear, Resume Play is not available.

2 Press ▷.
The player starts playback from the point where you stopped the disc in Step 1.

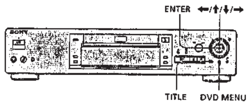
To play from the beginning of the disc
When the playing time appears on the front panel display before you start playing, press ■ to reset the playing time, then press ▷.

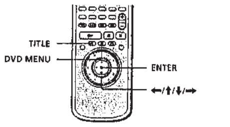
Notes
- Resume Play may not be available depending on the DVD.
- Resume Play is not available in Shuffle or Program Play mode.
- Depending on where you stopped the disc, the player may resume playback from a different point.
- The point where you stopped playing is cleared when:
  - you open or close the disc tray
  - you disconnect the AC power cord
  - you change the play mode
  - you start playback after selecting a title, chapter or track
  - you change the settings of "OSD," "DVD MENU," "AUDIO" or "SUBTITLE" in "LANGUAGE SETUP" in the setup display and "AUDIO" or "SUBTITLE" in the Control Menu display
  - you change the settings of "TV TYPE" in "SCREEN SETUP" in the setup display
  - you change the settings of "PARENTAL CONTROL" in "CUSTOM SETUP" in the setup display

Using the Menu for Each DVD DVD

Using the title menu

A DVD is divided into long sections of a picture or a music piece called "titles." When you play a DVD which contains several titles, you can select the title you want using the title menu.





1 Press TITLE.
The title menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press ←/↑/↓/→ to select the title you want to play.
Depending on the disc, you can use the number buttons to select the title.

3 Press ENTER.
The player starts playing the selected title.

Notes
- Depending on the DVD, you may not be able to select the title.
- Depending on the DVD, a "title menu" may simply be called a "menu" or "title " in the instructions supplied with the disc. "Press ENTER." may also be expressed as "Press SELECT."

Playing Discs

Using the DVD menu

Some DVDs allow you to select the disc contents using the menu. When you play these DVDs, you can select the language for the subtitles, the language for the sound, etc., using the DVD menu.

1 Press DVD MENU.
The DVD menu appears on the TV screen. The contents of the menu vary from disc to disc.

2 Press ←/↑/↓/→ to select the item you want to change.
Depending on the disc, you can use the number buttons to select the item.

3 To change other items, repeat Step 2.

4 Press ENTER.

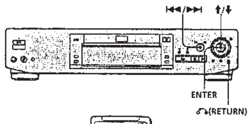
If you want to select the language for the DVD menu
Change the setting using "LANGUAGE SETUP" in the setup display. For details, see page 52.

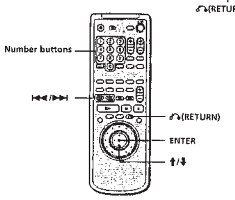
Note
Depending on the DVD, a "DVD menu" may simply be called a "menu" in the instructions supplied with the disc.

Playing Discs

Playing VIDEO CDs with PBC Functions (PBC Playback) VIDEO CD

When playing VIDEO CDs with PBC functions (Ver. 2.0 discs), you can enjoy simple interactive operations, operations with search functions, etc.
PBC Playback allows you to play VIDEO CDs interactively, following the menu screen on the TV screen. On this player, you can use the number buttons, ENTER, |◀◀, ▶▶|, ↑/↓ and ↶(RETURN) during PBC Playback.





1 Start playing a VIDEO CD with PBC functions, following Steps 1 to 4 in "Playing Discs" on page 17.

2 Select the item number you want.
On the player
Press ↑/↓ to select the item number.
On the remote
Press the number button of the item you want.

3 Press ENTER.

4 Follow the instructions on the menu screen for interactive operations.
Refer to the instructions supplied with the disc, as the operating procedure may differ according to the VIDEO CD.

Going back to the menu screen
Press ↶, |◀◀, or ▶▶|.

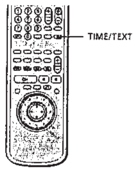
When playing VIDEO CDs with PBC functions
PBC playback starts automatically.

To cancel PBC playback of a VIDEO CD with PBC functions and play the disc in Continuous Play mode
There are two ways.
- Before you start playing, select the track you want using |◀◀ or ▶▶|, then press ENTER or ▷.
- Before you start playing, select the track number using the number buttons on the remote, then press ENTER or ▷.
  "Play without PBC" appears on the TV screen and the player starts Continuous Play. You cannot play still pictures such as a menu screen.
  To return to PBC playback, press ■ twice then press ▷.

Note
Depending on the VIDEO CD, "Press ENTER" in Step 3 may be expressed as "Press SELECT" in the instructions supplied with the disc.

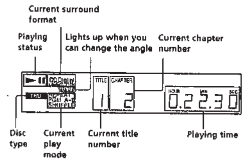
Using the Front Panel Display DVD VIDEO CD CD

You can check information about the disc, such as the total number of the titles or the tracks or remaining time, using the front panel display.



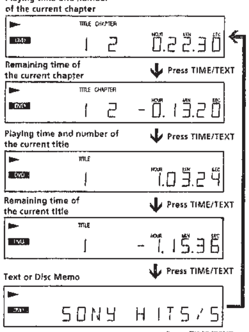
When playing back a DVD DVD

Display information while playing the disc



Checking the remaining time
Press TIME/TEXT.
Each time you press TIME/TEXT while playing the disc, the display changes as shown in the following chart.

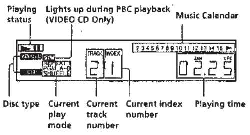
Playing Discs



Notes
- Depending on the DVD, the chapter number or time may not appear or you may not be able to change the front panel display.
- While you are doing Shuffle Play or Program Play, the playing time of the title and the remaining time of the title are not displayed.

When playing back a CD/VIDEO CD VIDEO CD CD

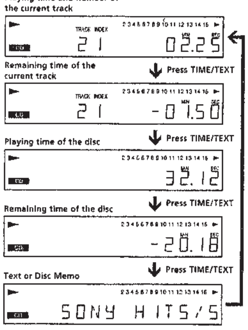
Display information while playing a disc



When playing VIDEO CDs with PBC functions
The current scene number is displayed instead of the current track number and the current index number. In this case, the front panel display does not change when you press TIME/TEXT. If a TEXT or Disc Memo is recorded on the disc, the front panel display changes to "Text or Disc Memo" display when you press TIME/TEXT.

Checking the remaining time

Press TIME/TEXT.
Each time you press TIME while playing a disc, the display changes as shown in the following chart.



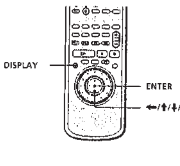
Note
While you are doing Shuffle Play, Program Play, or PBC playback, the playing time of the disc and the remaining time of the disc are not displayed.

Using Various Functions with the Control Menu

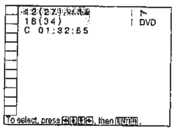
This chapter describes how to play discs in various modes and how to use the convenient features of the on-screen menu (Control Menu).

Using the Control Menu Display DVD VIDEO CD CD

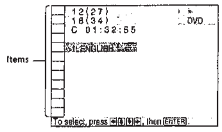
Using the Control Menu display, you can select the start point, label a disc, change the angles, adjust the picture, set for Digital Cinema Sound, etc.
The items are different depending on the kind of disc.
For details on each Control Menu display item, see pages 28 to 48.

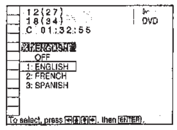


1 Press DISPLAY to show the Control Menu display on the TV screen.

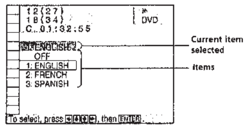


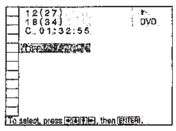
2 Select the item you want using ↑/↓, then press → or ENTER.





3 Select the item you want using ↑/↓, then press ENTER.





Note
Some Control Menu display items require operations other than selecting the setting. For details on these items, see the relevant pages.

To cancel using the Control Menu display on the way

Press ↶RETURN.

To display other items

Each time you press DISPLAY, the Control Menu display changes as follows:

→Control Menu display 1
↓
Control Menu display 2
(The items except the first three items from the top are changed to other items.)
↓
ADVANCED display (see page 43)
↓
Control Menu display off

You can display some items using the remote
Some items can be displayed by pressing the button of the remote. In this case, only the item you selected is displayed. For the item and operations using the remote, see the pages of each item.

Control Menu Item List

[TITLE] (DVD only) (page 28)
[CHAPTER] (DVD only) (page 28)
[TRACK] (VIDEO CD/CD only) (page 28)
[INDEX] (VIDEO CD/CD only) (page 28)
[SCENE] (VIDEO CD during PBC playback only) (page 28)
You can search by selecting the title/chapter/track/index/scene.

[TIME/TEXT] (page 29, 30, 31)
[TIME/MEMO] (page 29, 30, 31)
You can check the playing time and remaining time of the current title/chapter/track and the total remaining time of the disc.
You can search by inputting the time code.
You can check the DVD TEXT or CD TEXT of the disc on the TV screen and the front panel display. When the disc is a VIDEO CD or the DVD TEXT or CD TEXT is not recorded on the disc, you can label the disc as a Disc Memo and check it.

[AUDIO] (page 33)
With DVDs recorded with multilingual sounds, you can select the language you want while playing the DVD.
With multiplex CDs or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers.

[SUBTITLE] (DVD only) (page 34)
With DVDs on which multilingual subtitles are recorded, you can change the subtitle language whenever you want while playing the DVD, and turn it on or off whenever you want.

[ANGLE] (DVD only) (page 35)
With DVDs on which various angles (multi-angles) are recorded, you can change the angles on the scene for which multi-angles are recorded.

[VIRTUAL 3D SURROUND] (page 36)
Select the mode to enjoy multi-channel surround sound such as Dolby Digital and MPEG.
Even if you connect only front speakers, Virtual Enhanced Surround (VES) lets you enjoy 3D sound by using 3D sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers.
When you connect 2 front speakers and 2 rear speakers, you can use the 3D sound imaging to shift the sound of the rear speakers away from the actual speaker position (VIRTUAL REAR SHIFT) or to create 3 sets of virtual rear speakers from 1 set of actual rear speakers (VIRTUAL MULTI REAR).
You can feel the more effective 3D sound when you connect a receiver (amplifier) with 5.1 channel inputs, 2 front speakers, 2 rear speakers, 1 center speaker and 1 subwoofer.

[PROGRAM] (page 38)
You can play the contents of the disc in the order you want by arranging the order of the titles, chapters or tracks on the disc to create your own program.

[SHUFFLE] (page 40)
You can have the player "shuffle" titles, chapters or tracks and play them in a random order. The playing order may differ from the previous "shuffling."

[REPEAT] (page 41)
You can play all the titles/tracks on a disc or a single title/chapter/track repeatedly.

[A-B REPEAT] (page 41)
You can play a specific portion of a title, chapter, or track repeatedly.

[ADVANCED] (DVD only) (page 43)
You can check the play information about the bit rate, bit rate history or the position where the disc is played (layer).

[DNR] (DVD/VIDEO CD only) (page 45)
You can make the picture clearer by reducing the picture noise.

[VIDEO EQ] (DVD/VIDEO CD only) (page 45)
You can adjust the video output of the DVD or VIDEO CD from the player, not from the TV, to obtain the picture quality you want.

[ANGLE VIEWER] (DVD only) (page 47)
With DVDs on which various angles (multi-angles) for a scene are recorded, you can display all the angles recorded on the disc on the same screen, and start playback in continuous mode at the chosen angle directly.

Control Menu Item List

[STROBE PLAYBACK] (DVD/VIDEO CD only) (page 47)
You can display 9 consecutive sections of the disc on the screen. In this case, the sections show still images.

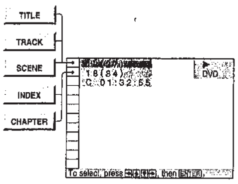
[TITLE VIEWER] (DVD only) (page 48)
[CHAPTER VIEWER] (DVD only) (page 48)
[TRACK VIEWER] (VIDEO CD only) (page 48)
You can check the titles, chapters and tracks of the disc on the screen divided in 9 sections, and start playback from the chosen title, chapter or track.

[BOOKMARK] (DVD/VIDEO CD only) (page 48)
You can have the player store specific portions of the disc in memory and play them immediately whenever you want without the need to search.

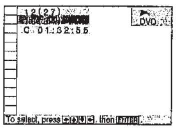
Searching for the Title/Chapter/Track/Index/Scene

DVD VIDEO CD CD

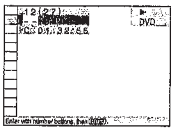
You can search by selecting the title/chapter/track/index/scene.
Select "TITLE," " CHAPTER," " TRACK", "INDEX" or "SCENE" after pressing DISPLAY.
When you play back a DVD, "TITLE" and "CHAPTER" are displayed.
When you play back a VIDEO CD/CD, "TRACK" and "INDEX" are displayed. When you play back a VIDEO CD with PBC functions, "SCENE" is displayed.



1 **Select "TITLE," "CHAPTER," "TRACK," "INDEX" or "SCENE" using ↑/↓.**
"＊＊(＊＊)" is highlighted. (＊＊ means optional number in this manual.) Number in parentheses indicate the total number of titles, chapters, tracks, indexes or scenes.



2 **Press → or ENTER.**
"＊＊(＊＊)" is changed to "– – (＊＊)".



3 **Select the number of the title, chapter, track, index or scene you want to search for using the number buttons, then press ENTER.**
The player starts searching. To cancel the number, press CLEAR before pressing ENTER.

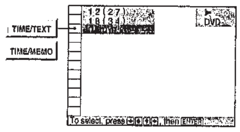
To cancel selecting
Press ↶RETURN.

Notes
- The number of titles, chapters or tracks displayed is that of the titles, chapters or tracks recorded on a disc.
- The index numbers are not displayed during PBC playback of VIDEO CDs.

Checking the Playing Time and Remaining Time

DVD VIDEO CD CD

You can check the playing time and remaining time of the current title /chapter/track and the total remaining time of the disc.
Select "TIME/TEXT" or "TIME/MEMO" after pressing DISPLAY.
You can also check the DVD TEXT, CD TEXT and Disc Memo, and label the Disc Memo. See page 31.



When playing a DVD
■TIME/TEXT or TIME/MEMO
- C ＊＊:＊＊:＊＊ : Playing time of the current chapter
- C –＊＊:＊＊:＊＊ : Remaining time of the current chapter
- T ＊＊:＊＊:＊＊ : Playing time of the current title
- T –＊＊:＊＊:＊＊ : Remaining time of the current title

When playing a VIDEO CD (during PBC playback)
■TIME/MEMO
- ＊＊:＊＊: Playing time of the current scene

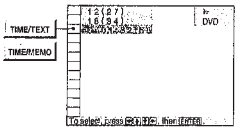
When playing a VIDEO CD (in continuous play) or CD
■TIME/TEXT or TIME/MEMO
- T ＊＊:＊＊: Playing time of the current track
- T –＊＊:＊＊: Remaining time of the current track
- D ＊＊:＊＊: Playing time of the current disc
- D –＊＊:＊＊: Remaining time of the current disc

You can display "TIME/TEXT" or "TIME/MEMO" display using the remote.
Press TIME/TEXT on the remote. Each time you press the button, the time information changes.

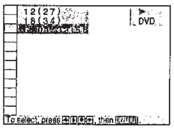
Selecting a Start Point Using the Time Code

DVD

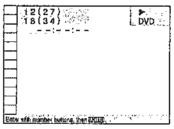
You can search by inputting the time code.
Select "TIME/TEXT" or "TIME/MEMO" after pressing DISPLAY.
The time code corresponds to the approximate actual playing time. For example, to search for a scene one hour past the beginning, input 1:00:00.



1 **Select "C＊＊:＊＊:＊＊" (playing time of the current chapter) when playing a DVD.**



2 **Press → or ENTER.**
Time code changes to "– –:– –:– –".



3 **Input the time code using the number buttons, then press ENTER.**
The player starts searching. To cancel the number, press CLEAR before pressing ENTER.

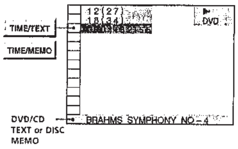
To cancel inputting
Press ↶RETURN.

You can display "TIME/TEXT" or "TIME/MEMO" display using the remote
Press TIME/TEXT on the remote.

Checking the Information of the Disc

DVD VIDEO CD CD

You can check the DVD TEXT or CD TEXT of the disc on the TV screen and the front panel display. When the disc is a VIDEO CD or the DVD TEXT or CD TEXT is not recorded on the disc, you can label the disc as a Disc Memo and then check it.
DVD TEXT and CD TEXT are information recorded on the disc which you cannot change.
Select "TIME/TEXT" or "TIME/MEMO" after pressing DISPLAY. Then press TIME/TEXT on the remote until DVD/CD TEXT or Disc Memo is displayed.
The information is displayed at the bottom of the display.



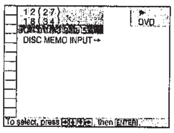
You can display "TIME/TEXT" or "TIME/MEMO" display using the remote
Press TIME/TEXT on the remote. To display DVD/CD TEXT or Disc Memo, press TIME/TEXT until DVD/CD TEXT or Disc Memo is displayed.

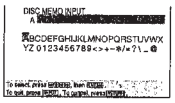
Note
The DVD TEXT only in English is displayed.

Labeling discs (Disc Memo)

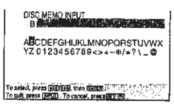
When the disc is a VIDEO CD or the DVD TEXT or CD TEXT is not recorded on the disc, you can change the name of the disc by labeling it on the on-screen display and put a personal title on the disc. You can input up to 20 characters per disc each.
You can also have the player display the Disc Memo each time you select the disc. The Disc Memo can be anything you like, such as a title, musician's name, category or date of purchase.

1 **Select "DISC MEMO INPUT→" in "TIME/TEXT" or "TIME/MEMO"**
The DISC MEMO INPUT display appears.

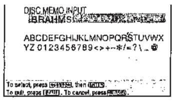




2 **Select the character by pressing ←/↑/↓/→ or by turning the click shuttle.**
The selected character changes color.

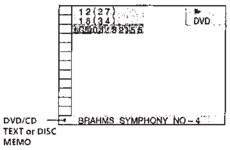


3 **Press ENTER.**
If you selected a wrong character, press CLEAR.



4 **Repeat steps 2 and 3 to input other characters.**

5 **When you have entered all the characters for the disc label, press INPUT on the remote.**
The disc label is stored.



To correct the characters
- You can erase the last character one by one by pressing CLEAR.
- To insert or overwrite the characters:
  1. Move the cursor to the character you want to correct by pressing ⏮/⏭.
  2. Select the correct character by pressing ←/↑/↓/→ or by turning the click shuttle.
  3. To insert the character, press ENTER. To overwrite, don't press ENTER but move the cursor by pressing ⏭.

You can display the Disc Memo input display using the remote
Press INPUT on the remote.

Erasing the Disc Memo

1 **Insert the disc you want to erase the Disc Memo from.**

2 **Select "DISC MEMO INPUT→" in "TIME/TEXT" or "TIME/MEMO" to display the DISC MEMO INPUT display.**

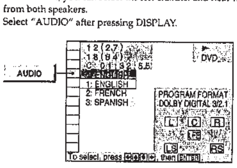
3 **Press CLEAR.**

You can display the "DISC MEMO INPUT→" display by using the remote
Press TIME/TEXT on the remote.

Note
You can label up to 200 discs.

Changing the Sounds DVD VIDEO CD CD

With DVDs recorded with multilingual sounds, you can select the language you want while playing the DVD.
With multiplex CDs or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. In this case, the sound loses the stereo effect. For example, with a disc containing a song, the right channel may output the vocals and the left channel may output the instrumental. If you only want to hear the instrumental, you can select the left channel and hear it from both speakers.
Select "AUDIO" after pressing DISPLAY.



■**AUDIO**
When playing a DVD
Select the language. The languages you can select are different depending on the DVD. When 4 digits are displayed, they represent the language code. Select the language code from the list on page 72.

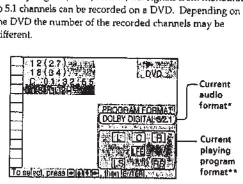
When playing a VIDEO CD or a CD
- STEREO (1/L 2/R) : The standard stereo sound
- 1/L : The sound of the left channel (monaural)
- 2/R : The sound of the right channel (monaural)

You can display "AUDIO" display using the remote
Press AUDIO on the remote.

Notes
- Depending on the DVD, you may not be able to change the languages even if multilingual sounds are recorded on the DVD.
- While playing the CD/VIDEO CD, the standard stereo playback will be resumed when:
  – you open or close the disc tray
  – you turn the power off
- While playing the DVD, the sound may be changed when:
  – you open or close the disc tray
  – you change the title
- If the language is displayed as a 4 digit number, refer to the language code list on page 72.

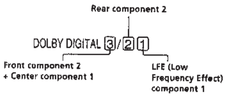
Displaying the audio information of the disc DVD

When you select "AUDIO," the playing channels are displayed on the screen.
In Dolby Digital (AC-3) format, the signals from monaural to 5.1 channels can be recorded on a DVD. Depending on the DVD the number of the recorded channels may be different.



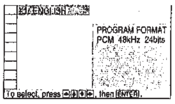
* "PCM," "DTS,""DOLBY DIGITAL" or "MPEG" is displayed. In "DOLBY DIGITAL" case, the channels in the playing track are displayed by number as follows:

The case of Dolby Digital (AC-3) 5.1 ch:

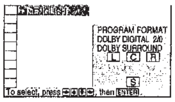


** The letters in the program format display mean the following:
- L: Front (L)
- R: Front (R)
- C: Center (monaural)
- LS: Rear (L)
- RS: Rear (R)
- S: Rear (monaural) – the rear component of the Dolby Surround processed stereo signal and the Dolby Digital signal.
- LFE: LFE (Low Frequency Effects)

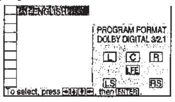
The display examples are as follows:
- PCM (stereo)



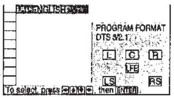
- Dolby Surround



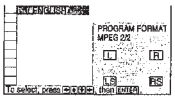
- Dolby Digital (AC-3) 5.1ch



- DTS



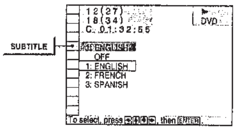
- MPEG



You can find Dolby Surround-encoded software by looking at the packaging
Use discs with the DOLBY DIGITAL logo. In order to enjoy Dolby Digital (AC-3) playback you must use discs bearing this logo.

Displaying the Subtitles DVD

With DVDs on which subtitles are recorded, you can turn the subtitles on and off whenever you want while playing the DVD.
With DVDs on which multilingual subtitles are recorded, you can change the subtitle language whenever you want while playing the DVD, and turn it on or off whenever you want. For example, you can select the language you want to master and turn the subtitles on for better understanding.
Select "SUBTITLE" after pressing DISPLAY.



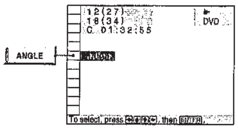
■**SUBTITLE**
Select the language. The languages you can select are different depending on the DVD. When 4 digits are displayed, they indicate the language code. Select the language code from the list on page 72.

You can display the "SUBTITLE" display by using the remote
Press SUBTITLE on the remote. Each time you press the button, the item changes.

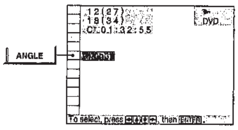
Notes
- When playing a DVD on which no subtitles are recorded, no subtitles appear.
- Depending on the DVD, you may not be able to turn the subtitles on even if they are recorded on it.
- Depending on the DVD, you may not be able to turn the subtitles off.
- If the language is displayed as a 4-digit number, refer to the language code list on page 72.
- The type and number of languages for subtitles vary from disc to disc.
- Depending on the DVD, you may not be able to change the subtitles even if multilingual subtitles are recorded on it.
- While playing the DVD, the subtitle may change when:
  – you open or close the disc tray
  – you change the title

Changing the Angles DVD

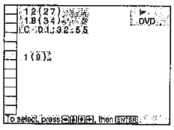
With DVDs on which various angles (multi-angles) for a scene are recorded, you can change the angles. For example, while playing a scene of a train in motion, you can display the view from either the front of the train, the left window of the train or from the right window without having the train's movement interrupted.
Select "ANGLE " after pressing DISPLAY. When the angles can be changed, the indicator of the "ANGLE" lights in green.



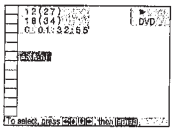
1 **Select "ANGLE."**



2 **Press →.**
The number of the angle is highlighted. The number in parentheses indicates the total number of angles.



3 **Select the number of the angles using the number buttons or ↑/↓, then press ENTER.**
The angle is changed to the selected angle.



Notes
- The number of angles varies from disc to disc or from scene to scene. The number of angles that can be changed on a scene is that of angles recorded for that scene.
- Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.

You can specify the angle beforehand
Specify the angle when "ANGLE" is not displayed on the front panel display. When a scene on which multi-angles are recorded comes, the angle is automatically selected.

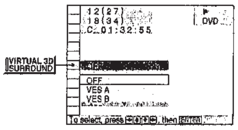
You can select the angle using the remote
Press ANGLE on the remote. Each time you press the button, the angle changes.

You can display different angles simultaneously (ANGLE VIEWER)
You can display all the angles recorded on the disc on the same screen, and start playback in continuous mode from the chosen angle directly. The angles are displayed on a screen divided in 9 sections. For details, see page 47.

Setting for Digital Cinema Sound DVD VIDEO CD CD

Select the mode to enjoy multi channel surround sound such as Dolby Digital and MPEG.
Even if you connect only front speakers, Virtual Enhanced Surround lets you enjoy 3D sound by using 3D sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers.
When you connect 2 front speakers and 2 rear speakers, use 3D sound imaging to shift the sound of the rear speakers away from the actual speaker position (VIRTUAL REAR SHIFT) or to create 3 sets of virtual rear speakers from 1 set of actual rear speakers (VIRTUAL MULTI REAR).
You can feel the more effective 3D sound when you connect a receiver (amplifier) with 5.1 channel inputs, 2 front speakers, 2 rear speakers, 1 center speaker and 1 subwoofer.
Select "VIRTUAL 3D SURROUND" after pressing DISPLAY. When you select the item except "OFF," the indicator of the "VIRTUAL 3D SURROUND" lights in green.

Note
To enjoy the original Dolby Digital (AC-3) sound through the 5.1CH OUTPUT connectors, set each speaker position or distance, etc. For details on setting each speaker, see page 61.



■VIRTUAL 3D SURROUND
Select the desired item. For details on each item, see "Effects of each item."
- OFF
- VES A*
- VES B*
- NORMAL SURROUND
- ENHANCED SURROUND
- VIRTUAL REAR SHIFT
- VIRTUAL MULTI REAR

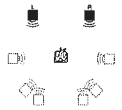
* These settings also effect the output from the AUDIO OUT connector.

Note
The items displayed are different depending on the settings of "SPEAKER SETUP." (page 61).
- You can select only "OFF," "VES A" or "VES B" when you play back a DVD and set "NONE" in "REAR" in "SIZE" under "SPEAKER SETUP" in the set up display.
- "VIRTUAL 3D SURROUND" is not displayed when you play back a VIDEO CD or CD and set "NONE" in "REAR" in "SIZE" under "SPEAKER SETUP" in the set up display.

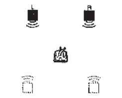
Effects of each Item

OFF
Outputs all channel signals recorded on the disc. For example, outputs 2-channel signals for stereo sound of the CD or 5-channel signals for Dolby Digital sound of the DVD. When you connect fewer than 5 (+1) speakers, the player distributes the output signal for the missing speaker to other speakers appropriately.

VES (Virtual Enhanced Surround) A
Uses 3D sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below.



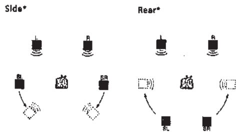
VES (Virtual Enhanced Surround) B
Uses 3D sound imaging to create virtual rear speakers from the sound of the front speakers (L, R) without using actual rear speakers. The virtual speakers are reproduced as shown in the illustration below.



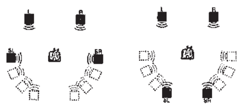
NORMAL SURROUND
Software with 2 channel audio signals, is decoded with Dolby Pro Logic to create surround effects.

ENHANCED SURROUND
Provides a greater sense of presence from Pro Logic source with monaural rear channel sound. Produces a stereo like effect in the rear channels.

VIRTUAL REAR SHIFT
Uses 3D sound imaging to shift the sound of the rear speakers away from the actual speaker position. The virtual speakers are reproduced as shown in the illustration below. The shift position differs according to the setting of the rear speaker position.



VIRTUAL MULTI REAR
Uses 3D sound imaging to create an array of virtual rear speakers from a single pair of actual rear speakers. The virtual speakers are reproduced as shown in the illustration below. The position of the virtual rear speakers differs according to the setting of the rear speaker position.



* See page 61 for details on how to set the rear speaker position.

L: Front speaker (left)
R: Front speaker (right)
SL: Rear speaker (left)
SR: Rear speaker (right)
[ ]: Virtual speaker

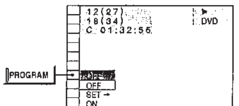
Notes
- Each item of "VIRTUAL 3D SURROUND" (except "NORMAL SURROUND" and "ENHANCED SURROUND") is effective on only discs on which a multi-channel soundtrack is recorded. Some discs do not have rear sound. In this case, you cannot get the 3D surround effect.
- When you select an item, the sound cuts off for a moment.
- When the playing signal does not contain the surround component, the effects may be difficult to hear even if you select "VES A" or "VES B."
- If you connect the front speakers only, "NORMAL SURROUND," "ENHANCED SURROUND," "VIRTUAL REAR SHIFT" and "VIRTUAL MULTI REAR" cannot be selected.
- The sound does not come from the rear speakers when you set "VIRTUAL 3D SURROUND" to "VES A" or "VES B" in the Control Menu display even if you have connected rear speakers.
- Set the front speakers to form an equilateral triangle including the listening position, or the effects may be difficult to hear even if you select "VES A" or "VES B."
- When you select "VES A" or "VES B," the player outputs the audio signal from AUDIO OUT, DIGITAL OUT (OPTICAL, COAXIAL) or 5.1CH OUTPUT FRONT connectors. Incase of the signal from DIGITAL OUT (OPTICAL, COAXIAL), however, the surround effect will be heard only when you play DVD or VIDEO CD with "DOLBY DIGITAL" set to "D-PCM," and "MPEG" to "PCM" in "AUDIO SETUP."
- When you play sound tracks with 96 kHz sampling frequency, be sure to select "OFF," or the output signals will be converted to 48 kHz (sampling frequency).
- When you connect a center speaker and a subwoofer, you can also hear the sound from the center speaker and the subwoofer. When you select "VES A" or "VES B," the player does not ouput the sound from the center speaker.

You can select the item of "VIRTUAL 3D SURROUND" using this button
Press VIRTUAL 3D SURROUND on the player. Each time you press the button, the item changes.

Creating Your Own Program (Program Play)

DVD VIDEO CD CD

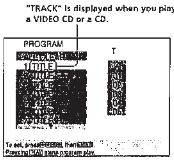
You can play the contents of the disc in the order you want by arranging the order of the titles, chapters or tracks on the disc and create your own program. One program can be restored in the player and contain up to 99 titles, chapters and tracks.
Select "PROGRAM" after pressing DISPLAY. When you select "ON", the indicator of the "PROGRAM" lights in green.



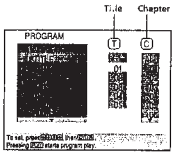
■PROGRAM
- OFF: plays normal.
- SET→: allows you to create your own program.
- ON: plays Program Play.

Creating the program

1 Select "SET→" in "PROGRAM".
The programming display appears.

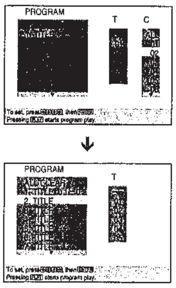


2 Press →.
"01" is highlighted. It is ready to set the first title or track for program.

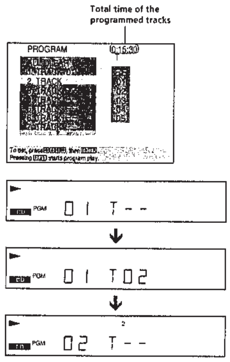


3 Select the title, chapter or track you want to program using ↑/↓, then press ENTER.
For example, select title or track 2.
(You can also use the number buttons and ENTER button to select. In this case, the selected number is displayed on the screen.)

■When playing a DVD
When both titles and chapters are recorded on the disc, select the title, then the chapter.



■When playing a VIDEO CD or CD
Select the track you want to program.



4 To program other titles, chapters or tracks, repeat Step 3.
The programmed titles, chapters or tracks are displayed from 2 in order.

5 Press ▷ to start Program Play.

To cancel Program Play
Press CLEAR.

To cancel programming
Press PROGRAM.

To change programming
1 In Step 2, select the program number of the title, chapter or track you want to change using ↑/↓.
2 Follow Step 3 for new programming.

To cancel the programmed order
To cancel all the titles, chapters or tracks in the programmed order, select "ALL CLEAR" in Step 2.
To cancel the selected program, select the program using ↑/↓ in Step 2 then press CLEAR, or select "- -" in Step 3 then press ENTER.

The program remains even after the Program Play ends
When you press ▷, you can play the same program again.

You can do Repeat Play or Shuffle Play of the programmed titles, chapters or tracks
During Program Play, press REPEAT or SHUFFLE. Or set "REPEAT" or "SHUFFLE" to "ON" in the Control Menu display.

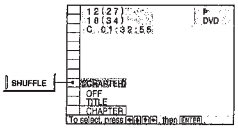
You can display "PROGRAM" display using the remote
Press PROGRAM.

Notes
- The number of titles, chapters or tracks displayed are that of the titles, chapters or tracks recorded on a disc.
- The program is canceled when:
  - you open or close the disc tray
  - you turn the power off
- You may not be able to do Program Play depending on the DVD.
- While you are doing PBC playback, you cannot set a program unless you stop playback once.

Playing in Random Order (Shuffle Play)

DVD VIDEO CD CD

You can have the player "shuffle" titles or tracks and play them in a random order. The playing order may differ from the previous "shuffling."
Select "SHUFFLE" after pressing DISPLAY. When you select "ON", the indicator of the "SHUFFLE " lights in green.



■SHUFFLE
Selects the setting of Shuffle Play.

When playing a DVD and when Program Play is set to OFF
- OFF: does not play a disc in random order.
- TITLE: has the player "shuffle" titles and play in a random order.
- CHAPTER: has the player "shuffle" chapters and play in a random order.

When playing a VIDEO CD, CD or DVD (when Program Play is set to ON)
- OFF: does not play a disc in random order.
- ON: has the player "shuffle" titles or tracks and play in a random order.

When playing a VIDEO CD or CD (when Program Play is set to OFF)
- OFF: does not play a disc in random order.
- TRACK: has the player "shuffle" tracks and play in a random order.

After selecting the item of "SHUFFLE", press ▷.
The player starts Shuffle Play.

To cancel Shuffle Play
Press CLEAR.

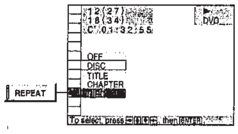
You can display the "SHUFFLE" display by pressing the button
Press SHUFFLE.

Notes
- Shuffle Play is canceled when:
  – you open or close the disc tray
  – you turn the power off
- You may not be able to do Shuffle Play depending on the DVD.
- Up to 200 chapters in a disc can be played in a random order when "CHAPTER" is selected.

Playing Repeatedly (Repeat Play)

DVD VIDEO CD CD

You can play all the titles/tracks on a disc or a single title/chapter/track.
In Shuffle or Program Play mode, the player repeats the titles or tracks in the shuffled or programmed order.
You cannot do Repeat Play during PBC playback of VIDEO CDs (page 22).
You may not be able to do Repeat Play depending on the DVD.
Select "REPEAT" after pressing DISPLAY. When you do not select "OFF," the indicator of the "REPEAT" lights in green.



■REPEAT
Selects the setting of Repeat Play.
When playing a DVD and when Program Play and Shuffle Play are set to OFF
- OFF: does not play repeatedly.
- DISC: repeats all the titles.
- TITLE: repeats the current title on a disc.
- CHAPTER: repeats the current chapter.

When playing a VIDEO CD/CD and when Program Play and Shuffle Play are set to OFF
- OFF: does not play repeatedly.
- DISC: repeats all the tracks on a disc.
- TRACK: repeats the current track.

When Program Play or Shuffle Play is set to ON
- OFF: does not play repeatedly.
- ON: repeats Program Play or Shuffle Play.

To cancel Repeat Play
Press CLEAR.

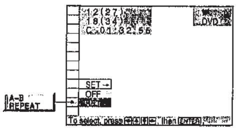
You can display the "REPEAT" display by pressing the button
Press REPEAT.

Note
Repeat play is canceled when you turn the power off.

Repeating a Specific Portion (A←→B Repeat)

DVD VIDEO CD CD

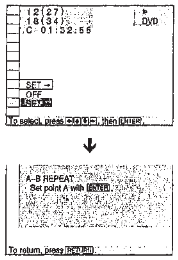
You can play a specific portion of a title, chapter, track repeatedly. This is useful when you want to memorize lyrics.
During PBC Playback of VIDEO CDs (page 22), this function is available only while playing moving pictures.
You may not be able to do A←→B Repeat Play depending on the DVD.
Select "A-B REPEAT" after pressing DISPLAY. During A←→B Repeat Play, the indicator of the "A-B REPEAT" lights in green.



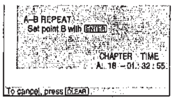
■A-B REPEAT
- SET→: sets the A and B points.
- OFF: does not play a specific portion of a title/chapter/track repeatedly.

Setting a portion for A←→B repeat

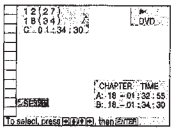
1 Select "SET→" in "A-B REPEAT."
The A←→B REPEAT setting display appears.



2 During playback, when you find the starting point (point A) of the portion to be played repeatedly, press ENTER.
The starting point (point A) is set.



3 When you reach the ending point (point B), press ENTER again.
The setting points are displayed and the player starts repeating this specific portion.
"A-B" appears on the front panel display during A←→B repeat play.



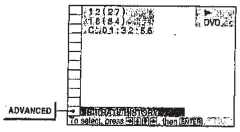
To cancel A←→B Repeat Play
Press CLEAR.

Notes
- You can set A←→B Repeat on only one specific portion.
- A←→B Repeat is canceled when:
  – you open or close the disc tray
  – you turn the power off
- When you set A←→B Repeat, the settings for Shuffle Play and Program Play are canceled.
- You may not be able to set A←→B Repeat, depending on the scene of the DVD or the VIDEO CD.

Checking the Play Information

DVD

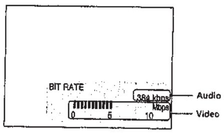
You can check the play information on the bit rate, bit rate history or the portion where the disc is played (layer).
While playing a disc, the approximate bit rate of the playback picture is always displayed by Mbps (Mega bit per second) and the audio by Kbps (Kilo bit per second).
Select "ADVANCED" after pressing DISPLAY.



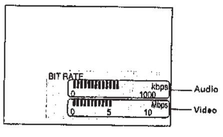
■ADVANCED
When playing a DVD
- BIT RATE: displays bit rate.
- BIT RATE HISTORY: displays bit rate and bit rate history.
- LAYER: displays layer and the point picked up.
- OFF: turns off ADVANCED display.

Displays of each Item

BIT RATE

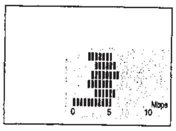


When you play MPEG AUDIO sound tracks



Bit rate refers to the amount of video/audio data per second in a disc. The higher the bit rate is, the larger the amount of data. When the bit rate level is high, there is a large amount of data. However, this does not always mean that you can get higher quality pictures or sounds.

BIT RATE HISTORY



Indicates the transition of bit rate of the playback picture for a period up to the present.

Checking the Play Information

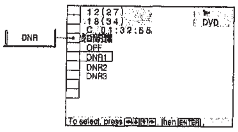
LAYER

Indicates where the disc is played. When the DVD has dual-layer, the player indicates which layer is being read. For details on layer, see page 70.

Using Various Functions with the Control Menu

Reducing the Picture Noise (DNR: Digital Video Noise Reduction) DVD VIDEO CD

You can make the picture clearer by reducing the picture noise of the background.
Select "DNR" after pressing DISPLAY.
When you select "DNR1," "DNR2," or "DNR3," the indicator of the "DNR " lights in green.



■DNR

As the value increases, the picture noise will be reduced. However, afterimages may increase.

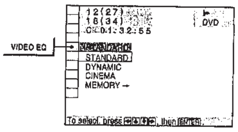
- OFF: turns off the DNR function
- DNR1
- DNR2
- DNR3

Notes

- Depending on the disc, the effect may be difficult to tell.
- If the afterimages appear on the TV screen, set the noise reduction function to off on your TV. Then set "DNR" to "OFF" on the Control Menu display.

Adjustments for Playback Picture (VIDEO EQ: Video Equalizer) DVD VIDEO CD

You can adjust the video output of the DVD or VIDEO CD from the player, not from the TV, to obtain the picture quality you want. Choose one of the video modes whichever best suits the program you are watching.
When you select "MEMORY➡" in a menu item, adjust the value.
Select "VIDEO EQ" after pressing DISPLAY.



■VIDEO EQ

Selects the setting of video control.

- STANDARD: displays a standard picture
- DYNAMIC: emphasizes the black level and so produces a bolder dynamic picture
- CINEMA: displays a finely detailed picture
- MEMORY➡: adjusts the picture items

To adjust the picture items

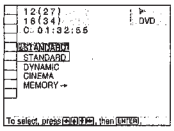
You can adjust the following picture items individually.

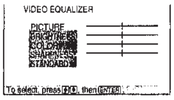
- PICTURE
- BRIGHTNESS
- COLOR
- SHARPNESS

Using Various Functions with the Control Menu

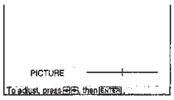
Adjustments for Playback Picture (VIDEO EQ: Video Equalizer)

1 **Select "MEMORY➡" in "VIDEO EQ."**
The video control display appears.

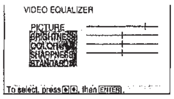




2 **Select the picture item you want to adjust using ↑/↓, then press ENTER.**
The adjustment bar of the selected item appears.
To cancel adjusting the picture halfway, press ↩RETURN.



3 **Adjust the selected picture item using ←/→, then press ENTER.**



4 **To adjust other items, repeat Steps 2 and 3.**

To cancel adjusting the picture

Press ↩RETURN.

To reset the picture items

Select "STANDARD" in "MEMORY➡."

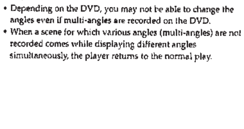
Note

Only one setting of the picture items you adjusted in "MEMORY➡" can be stored. When you adjust the items, new setting erases the setting adjusted before.

Using Various Functions with the Control Menu

Displaying Different Angles Simultaneously DVD

With DVDs on which various angles (multi-angles) for a scene are recorded, you can display all the angles recorded on the disc on the same screen, and start playback in continuous mode at the chosen angle directly. The angles are displayed on a screen divided in 9 sections. Select "ANGLE VIEWER" after pressing DISPLAY. When you can select "ANGLE VIEWER", the indicator of the "ANGLE VIEWER" lights in green.



To select the one angle

Select the angle using ←/↑/↓/→, then press ENTER. The selected angle only is displayed.

To cancel displaying multi-angles

Press ↩RETURN.

You can check the number on the front panel display

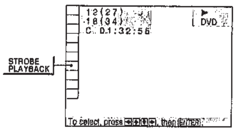
The number of the angle you select is displayed on the front panel display.

Notes

- Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.
- When a scene for which various angles (multi-angles) are not recorded comes while displaying different angles simultaneously, the player returns to the normal play.

Dividing a Tra k into 9 Sections (Strobe Play) DVD VIDEO CD

You can display 9 consecutive sections of the disc on the screen. In this case, the sections show still images.
Select "STROBE PLAYBACK" after pressing DISPLAY.



To cancel watching the strobe play

Press ↩RETURN.

During pause mode, 9 still images around the pause position are displayed

It is convenient to see the still images around the specific portion.

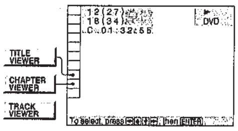
Note

Depending on the disc, there are some scenes you may not be able to watch with the strobe play.

Using Various Functions with the Control Menu

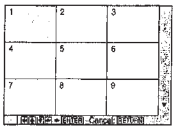
Scanning the Title, Chapter and Track [i] DVD VIDEO CD

You can check the top picture of titles, chapters and tracks of the disc on a screen divided in 9 sections, and start playback from the chosen title ,chapter or track.
Select "TITLE VIEWER"(DVD only), "CHAPTER VIEWER"(DVD only) or "TRACK VIEWER"(VIDEO CD only) after pressing DISPLAY.



To start playback from the selected picture
Select the picture using ←/↑/↓/→, then press ENTER.
The playback starts from the selected picture.

When there are over 9 titles or chapters
▼ appears at the right bottom of the screen. Use ↓ to scroll and display next titles or chapters.



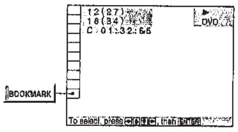
You can check the number on the front panel display
The number of the title, chapter and track you select is displayed on the front panel display.

To cancel scanning the title, chapter and track
Press RETURN.

Notes
- Depending on the disc, you may not be able to scan the title, chapter and track.
- You cannot scan the title, chapter and track on a VIDEO CD during PBC playback.

Setting and Selecting Favorite Scene (Bookmark) [i] DVD VIDEO CD

You can have the player store specific portions of the disc in memory and play them immediately whenever you want without the need to search (Bookmark). Up to 9 bookmarks per disc for up to 200 discs can be stored in memory.
Select "BOOKMARK" after pressing DISPLAY. When you play the disc which has bookmarks, the indicator of the "BOOKMARK" lights in green.



To start playback from the selected picture
Select the picture using ←/↑/↓/→, then press ENTER.
The playback starts from the selected picture.

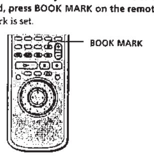
To cancel scanning the bookmark pictures
Press RETURN.

To reset the bookmark
Select the the point on which you want to reset the bool:mark using ←/↑/↓/→, then press CLEAR.

To reset the all bookmarks of the player
Select "BOOKMARK RESET→" under the "CUSTOM SETUP" in the setup display. For details on resetting all the bookmark of the player, see page 55.

Setting the bookmark

During playback, when you find the scene to be bookmarked, press BOOK MARK on the remote.
The bookmark is set.



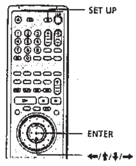
Settings and Adjustments

This chapter describes how to set and how to adjust using the on-screen SET UP menu. Most settings and adjustments are required to be set when you first use the player.
This chapter also describes how to set the remote for controlling the TV or the AV receiver (amplifier).

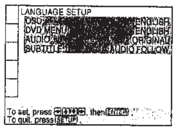
Using the Setup Display [i] DVD VIDEO CD CD

Using the setup display, you can do the initial setup, adjusting the picture and sound quality, setting the various outputs, etc. You can also set a language for the subtitles and the setup display, limit playback by children, etc.
For details on each setup display item, see pages 52 to 64.

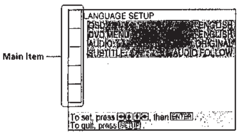
Note
You can display the setup display only when the player is in stop mode.



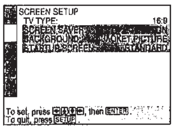
1 **Press SET UP to display the setup display on the TV screen.**



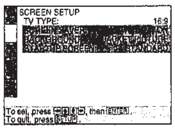
2 **Select the main item you want using ↑/↓, and then press ENTER.**
The selected main item is highlighted.



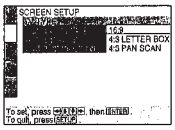
↓



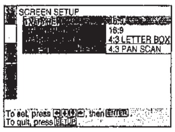
3 **Select the item you want using ↑/↓, then press → or ENTER.**



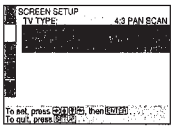
↓



4 **Select the setting you want using ←/↑/↓/→, then press ENTER.**



↓



To cancel using the setup display on the way
Press SET UP on the remote.

Note
Some setup display items require operations other than selecting the setting. For details on these items, see the relevant pages.

Setup Display Item List

Default settings are underlined.

LANGUAGE SETUP (page 52)
- OSD — ENGLISH (underlined) / FRANÇAIS / DEUTSCH / ITALIANO / ESPAÑOL / NEDERLANDS / DANSK / SVENSKA / SUOMI / NORSK / PORTUGUÊS
- DVD MENU — ENGLISH (underlined) / FRANÇAIS / DEUTSCH / ITALIANO / ESPAÑOL / NEDERLANDS / DANSK / SVENSKA / SUOMI / NORSK / PORTUGUÊS / PYCCKИЙ / CHINESE / JAPANESE / OTHERS →
- AUDIO — ORIGINAL (underlined) / (same as DVD MENU)
- SUBTITLE — AUDIO FOLLOW (underlined) / (same as DVD MENU)

SCREEN SETUP (page 53)
- TV TYPE — 16:9 (underlined) / 4:3 LETTER BOX / 4:3 PAN SCAN
- SCREEN SAVER — ON (underlined) / OFF
- BACKGROUND — JACKET PICTURE (underlined) / PICTURE MEMORY / GRAPHICS / BLUE / BLACK
- STARTUP SCREEN — STANDARD (underlined) / PICTURE MEMORY

CUSTOM SETUP (page 54)
- COMPONENT OUT — OFF (underlined) / ON
- EURO AV OUT — VIDEO (underlined) / S VIDEO / RGB
- AUTO PLAY — OFF (underlined) / TIMER / DEMO1 / DEMO2
- DIMMER — BRIGHT (underlined) / DARK / OFF
- PAUSE MODE — AUTO (underlined) / FRAME
- BOOKMARK RESET →
- PARENTAL CONTROL →
- PLAYBACK MEMORY — ON (underlined) / OFF

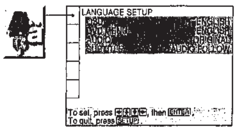
AUDIO SETUP (page 58)
- AUDIO ATT — OFF (underlined) / ON
- AUDIO FILTER — SHARP (underlined) / SLOW
- AUDIO DRC — STANDARD (underlined) / TV MODE / WIDE RANGE
- TRACK SELECTION — OFF (underlined) / AUTO
- DOWN MIX — DOLBY SURROUND (underlined) / NORMAL
- DIGITAL OUT — ON (underlined) — DOLBY DIGITAL / MPEG / DTS; OFF

SPEAKER SETUP (page 61)
- SIZE — FRONT / CENTER / REAR / SUBWOOFER
- DISTANCE — FRONT / CENTER / REAR
- BALANCE — FRONT / REAR
- LEVEL — CENTER / REAR / SUBWOOFER
- TEST TONE — OFF (underlined) / ON

Setting the Language for Display and Sound (LANGUAGE SETUP) DVD VIDEO CD CD

Select "LANGUAGE SETUP" after pressing SET UP.
"LANGUAGE SETUP" allows you to set various languages for on-screen display or sound.
Default settings are underlined.

Note
When you select a language that is not recorded on the DVD, one of the recorded languages is automatically selected except for the "OSD".



■OSD (On-Screen Display)
Switches the language for the on-screen display.
- ENGLISH (ENGLISH)
- FRANÇAIS (FRENCH)
- DEUTSCH (GERMAN)
- ITALIANO (ITALIAN)
- ESPAÑOL (SPANISH)
- NEDERLANDS (DUTCH)
- DANSK (DANISH)
- SVENSKA (SWEDISH)
- SUOMI (FINNISH)
- NORSK (NORWEGIAN)
- PORTUGUÊS (PORTUGUESE)

■DVD MENU
Switches the language for the DVD menu.
- ENGLISH (ENGLISH)
- FRANÇAIS (FRENCH)
- DEUTSCH (GERMAN)
- ITALIANO (ITALIAN)
- ESPAÑOL (SPANISH)
- NEDERLANDS (DUTCH)
- DANSK (DANISH)
- SVENSKA (SWEDISH)
- SUOMI (FINNISH)
- NORSK (NORWEGIAN)
- PORTUGUÊS (PORTUGUESE)
- РУССКИЙ (RUSSIAN)
- CHINESE (CHINESE)
- JAPANESE (JAPANESE)
- OTHERS→
  When you select "OTHERS→," select and enter the language code from the list using the number buttons (page 72).
  After you have once selected, the language code (4 digits) is displayed.

■AUDIO
Switches the language for the sounds.
- ORIGINAL: the language given priority in the disc
- ENGLISH (ENGLISH)
- FRANÇAIS (FRENCH)
- DEUTSCH (GERMAN)
- ITALIANO (ITALIAN)
- ESPAÑOL (SPANISH)
- NEDERLANDS (DUTCH)
- DANSK (DANISH)
- SVENSKA (SWEDISH)
- SUOMI (FINNISH)
- NORSK (NORWEGIAN)
- PORTUGUÊS (PORTUGUESE)
- РУССКИЙ (RUSSIAN)
- CHINESE (CHINESE)
- JAPANESE (JAPANESE)
- OTHERS→
  When you select "OTHERS→," select and enter the language code from the list using the number buttons (page 72).
  After you have once selected, the language code (4 digits) is displayed.

■SUBTITLE
Switches the language for the subtitles.
- AUDIO FOLLOW*
- ENGLISH (ENGLISH)
- FRANÇAIS (FRENCH)
- DEUTSCH (GERMAN)
- ITALIANO (ITALIAN)
- ESPAÑOL (SPANISH)
- NEDERLANDS (DUTCH)
- DANSK (DANISH)
- SVENSKA (SWEDISH)
- SUOMI (FINNISH)
- NORSK (NORWEGIAN)
- PORTUGUÊS (PORTUGUESE)
- РУССКИЙ (RUSSIAN)
- CHINESE (CHINESE)
- JAPANESE (JAPANESE)
- OTHERS→
  When you select "OTHERS→," select and enter the language code from the list using the number buttons (page 72).
  After you have once selected, the language code (4 digits) is displayed.

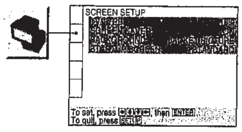
* When you select "AUDIO FOLLOW," the language for the subtitles changes according to the language for the setting you selected in "AUDIO."

Note
The player gives priority to the settings of "SUBTITLE" and "AUDIO" in the Control Menu display when "PLAYBACK MEMORY" is set to "ON." The settings of "SUBTITLE" and "AUDIO" selected in the setup display may not appear in this case. For details on the Playback Memory function, see page 55.

Settings and Adjustments

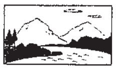
Settings for Display (SCREEN SETUP) DVD VIDEO CD CD

Select "SCREEN SETUP" after pressing SET UP.
"SCREEN SETUP" allows you to set the display according to the playback conditions.
Default settings are underlined.



■TV TYPE
Selects the aspect ratio of the TV to be connected.
- 16:9: when you connect a wide-screen TV to the player.
- 4:3 LETTER BOX: when you connect a normal TV to the player. Displays a wide picture with bands displayed on the upper and lower portions of the screen.
- 4:3 PAN SCAN: when you connect a normal TV to the player. Displays the wide picture on the whole screen with a portion automatically cut off.

16:9



4:3 LETTER BOX

4:3 PAN SCAN

Note
Depending on the DVD, "4:3 LETTER BOX" may be selected automatically instead of "4:3 PAN SCAN" and vice versa.

■SCREEN SAVER
Turns on and off the screen saver. If you turn on the screen saver, the screen saver image appears when you leave the player or the remote in pause or stop mode for 15 minutes or when you play back a CD for more than 15 minutes. The screen saver is useful to prevent your display from becoming damaged.
- ON: turns on the screen saver.
- OFF: turns off the screen saver.

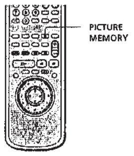
■BACKGROUND
Selects the background color or picture of the TV screen in stop mode or while playing a CD.
- JACKET PICTURE: The jacket picture appears in the background, but only when the jacket picture is already recorded on the disc.
- PICTURE MEMORY: Your favorite picture appears in the background when you have the player store in memory your favorite scene recorded on the disc for the background picture. For the way of storing in memory, see "Storing the picture in memory."
- GRAPHICS: The graphic picture stored in memory in the player beforehand appears in the background.
- BLUE: The background color is blue.
- BLACK: The background color is black.

■STARTUP SCREEN
Selects the startup screen. The startup screen image you selected appears when you turn on the player.
- STANDARD: The standard startup screen memorized in the player beforehand appears.
- PICTURE MEMORY: Your favorite picture appears in the startup screen when you have the player store in memory your favorite scene recorded on the disc for the startup screen. For the way of storing in memory, see "Storing the picture in memory" (page 54).

Settings and Adjustments

Storing the picture in memory

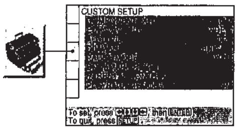
During playback, when you find the scene to be stored in memory, press PICTURE MEMORY on the remote.
The picture is stored in memory.



Notes
- The player can store in memory only one scene. The stored picture appears in both the background and the startup screen.
- When the picture is stored in memory by pressing PICTURE MEMORY, the picture stored before is not retained in memory.
- When you operate this player during storing picture in memory, the picture does not be stored in memory.

Custom Settings (CUSTOM SETUP) DVD VIDEO CD CD

Select "CUSTOM SETUP" after pressing SET UP.
"CUSTOM SETUP" allows you to set the playback conditions.
Default settings are underlined.



■COMPONENT OUT
Selects the methods of outputting video signals from the COMPONENT VIDEO OUT (Y, CB/B-Y, CR/R-Y) connectors on the rear panel of the player.
When you select "ON," you need to connect the monitor or projector via EURO AV, VIDEO OUT or S VIDEO OUT beforehand.
- OFF: outputs no signals.
- ON: outputs the component video signals.

Notes
- When you set "EURO AV OUT" to "RGB", you cannot set "COMPONENT OUT" to "ON."
- When you connect the player to a monitor or projector via only the COMPONENT VIDEO OUT connectors, do not select "OFF." If you select "OFF" in this case, the picture may not appear.

■EURO AV OUT
Selects the methods of outputting video signals from the EURO AV 1(RGB)-TV connectors on the rear panel of the player.
- VIDEO: outputs the video signals.
- S VIDEO: outputs the S video signals.
- RGB: outputs the RGB signals.

Notes
- When you set "COMPONENT OUT" to "ON", you cannot set "EURO AV OUT" to "RGB."
- If your TV is not conformed to the S video or the RGB signals, no picture appears on the TV screen even if you select "S VIDEO" or "RGB." Refer to the instructions supplied with your TV.
- If your TV has only one EURO AV IN connector, do not select "S VIDEO."

■AUTO PLAY
Selects the setting of Auto Play when you connect the AC power cord to the AC outlet.
- OFF: does not use "TIMER," "DEMO1" or "DEMO2" to start playing.

Settings and Adjustments

- TIMER: starts playing a disc automatically when you connect the AC power cord to the AC outlet. By connecting a timer (not supplied), you can start playing at any time you want.
- DEMO1: starts playing the demonstration 1 automatically.
- DEMO2: starts playing the demonstration 2 automatically.

■DIMMER
Adjusts the lighting of the front panel display.
- BRIGHT: makes the front panel display bright.
- DARK: makes the front panel display dark.
- OFF: turns off the lighting of the front panel display.

■PAUSE MODE
Selects the picture in pause mode.
- AUTO: A picture including subjects that move dynamically is output with no jitter. Normally select this position.
- FRAME: A picture including subjects that do not move dynamically is output with high resolution.

■BOOKMARK RESET→
Select "BOOKMARK RESET→." The BOOKMARK reset display appears. And then press ENTER to reset all bookmarks.

■PARENTAL CONTROL→
Sets a password and playback limitation level when you play DVDs with playback limitation for children.
For details, see "Limiting Playback by Children (Parental Control) ."

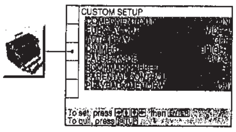
■PLAYBACK MEMORY
You can have the player store the settings of SUBTITLE and VIDEO EQ, etc., of each disc up to 200 discs. (Playback Memory)
Set the Playback Memory function on or off.
- ON: stores the settings in memory when you eject the disc.
- OFF: does not store the settings in memory.

Following settings are stored in memory with the Playback Memory function.
- AUDIO (page 33)
- SUBTITLE (page 34)
- ANGLE (page 35)
- VIRTUAL 3D SURROUND (page 36)
- VIDEO EQ (page 45)
- DNR (page 45)

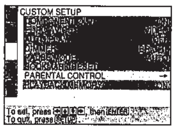
Note
The player can store in memory the settings of up to 200 discs. When you have the player store over 200 discs in memory, each new setting erases the setting from those first stored.

Limiting Playback by Children (Parental Control) DVD

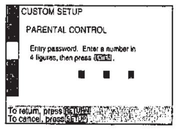
Select "CUSTOM SETUP" after pressing SET UP.
Playing some DVDs can be limited depending on the age of users. The "Parental Control" function allows you to set a playback limitation level.



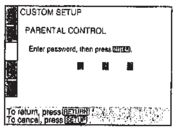
1 Select "PARENTAL CONTROL" using ↑/↓, then press ENTER.



■When you have not entered a password yet
The display for entering a password appears.

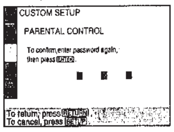


■When you have already entered a password
The display for confirming the password appears. Skip Step 2.

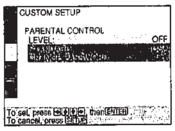


Settings and Adjustments

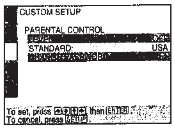
2 **Enter a password in 4 digits using the number buttons, then press ENTER.**
The digits change to asterisks (✳), and the display for confirming the password appears.



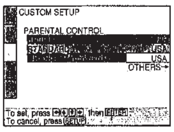
3 **To confirm your password, enter it using the number buttons, then press ENTER.**
The display for setting the playback limitation level and changing the password appears.



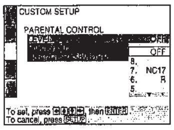
4 **Select "STANDARD" using ↑/↓, then press →.**



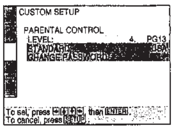
5 **Select an area as the standard for playback limitation level using ↑/↓, then press →.**
When you select "OTHERS→," select and enter the standard code in the table below using number buttons.



6 **Select "LEVEL" using ↑/↓, then press →.**



7 **Select the level you want using ↑/↓, then press ENTER.**



The lower the value is, the more strict the limitation.

To return to the normal screen
Press SET UP.

To turn off the Parental Control function and play the DVD after entering your password
Set "LEVEL" to "OFF" in Step 7, then press ▷.

To change the password
1 After Step 3, select "CHANGE PASSWORD" using ↑/↓, then press → or ENTER.
The display for changing the password appears.
2 Follow Steps 2 and 3 to enter a new password.

💡 **You can turn off the Parental Control function just after inserting the DVD (Parental Control Temporarily Canceled)**
When you set a playback limitation level and insert the DVD, the PARENTAL CONTROL display appears. Enter the password to turn off the Parental Control function.
When you stop playing the DVD, the level returns to the original level.

💡 **If you have forgot your password**
Enter the 6 digits number "199703" in Step 2 to clear the current password. To enter a new password, follow the procedure from Step 2 again.

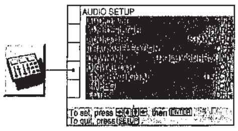
Notes
- When you play DVDs which do not have the Parental Control function, playback cannot be limited on this player.
- When you do not set a password, you cannot change the settings for playback limitation.
- Depending on the DVD, you may be asked to change the parental control level while playing the disc. In this case, enter the password, then change the level.
  When you stop playing the DVD, the level returns to the original level.

Standard	Code number
Austria	2046
Belgium	2057
Canada	2079
China	2092
Denmark	2115
Finland	2165
France	2174
Germany	2109
Hong Kong	2219
Indonesia	2238
Italy	2254
Japan	2276
Malaysia	2363
Netherlands	2376
Norway	2379
Philippines	2424
Russian	2489
Singapore	2501
Spain	2149
Sweden	2499
Switzerland	2086
Taiwan	2543
Thailand	2528
United Kingdom	2184

Settings and Adjustments

Settings for Sound (AUDIO SETUP)

Select "AUDIO SETUP" after pressing SET UP.
"AUDIO SETUP" allows you to set the sound according to the playback conditions.
Default settings are underlined.



■AUDIO ATT (attenuation)
Selects the setting of the output from the AUDIO OUT, EURO AV (1,2) and 5.1 OUTPUT connectors according to the audio equipment to be connected.
- OFF: turns off the audio attenuation.
- ON: reduces the audio output level so that no sound distortion occurs.

Note
The setting does not affect the output from the DIGITAL OUT OPTICAL and COAXIAL connectors.

■AUDIO FILTER
Selects the type of digital filter to reduce the noise of a frequency higher than 22.05kHz (fs 44.1kHz), 24kHz (fs 48kHz) or 48kHz (fs 96kHz).
- SHARP: makes the sound clear and provides smooth sound reproduction. Normally set this position.
- SLOW: makes the sound warm and deep.

Note
Depending on the disc, the effect on the sound may be difficult to hear.

■AUDIO DRC (Dynamic Range Control)
Makes the sound clear with the volume turned down at night, etc., when you play a DVD. This affects the output from the DIGITAL OUT connectors only when "PCM" in "DIGITAL OUT" is set to "ON," and it affects the output from the AUDIO OUT, EURO AV (1,2) and 5.1CH OUTPUT connectors.
- STANDARD: Normally select this position.
- TV MODE: makes the low sound clear even if you turned the volume down, so it is good for playing at night. It is especially recommended when you listen to the sound using the speakers of the TV.
- WIDE RANGE: It gives you the feeling of being at a live performance. When you use high quality speakers, it is more effective.

Notes
- When you play DVDs without the AUDIO DRC function, the effect on the sound may be difficult to hear.
- When this item is set to "WIDE RANGE," the sound volume from other than the 5.1CH OUTPUT connectors may be less than usual.
- "WIDE RANGE" cannot be selected when you have selected "NONE" in "SIZE" under "SPEAKER SETUP."

■TRACK SELECTION
Gives the sound track which contains the highest number of the channels priority when you play a DVD on which multiple audio formats are recorded. If multiple audio channels are recorded in PCM, DTS, MPEG AUDIO or Dolby Digital (AC-3) format, the higher-numbered channel audio recorded in PCM, DTS, MPEG AUDIO or Dolby Digital (AC-3) format is played.
- OFF : No priority given.
- AUTO : Priority given.,

Notes
- When the player stores the settings in memory with the Playback Memory function, the player may not give priority even if you select "AUTO."
- When you set this item to "AUTO", the language may change depending on the "AUDIO" settings in "LANGUAGE SETUP." The "TRACK SELECTION" setting has higher priority than that of "AUDIO" settings in "LANGUAGE SETUP" (page 52).
- If you set "DTS" in "AUDIO SETUP" to "OFF", the DTS sound track is not played even if you set this item to "AUTO" and the highest-numbered channel audio is recorded in DTS format.
- If PCM, DTS, MPEG AUDIO and Dolby Digital (AC-3) sound tracks have the same number of the highest channels, the player selects PCM, DTS, Dolby Digital (AC-3) and MPEG AUDIO sound tracks, in this order.
- Depending on the DVD, the audio with priority may be predetermined. In this case, you cannot give priority to the DTS, MPEG AUDIO or Dolby Digital (AC-3) format by selecting "AUTO."

Settings and Adjustments

■DOWN MIX*
Switches the mixing down methods when you play a DVD on which the sound in Dolby Digital (AC-3) format is recorded.
- DOLBY SURROUND: when the player is connected to an audio component that conforms to Dolby surround (Pro Logic).
- NORMAL: when the player is connected to a normal audio component.

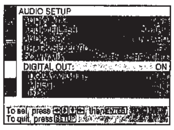
* The setting affects the following connectors:
–AUDIO OUT connector
–DIGITAL OUT (OPTICAL, COAXIAL) connectors.

■DIGITAL OUT
Selects output signals via the DIGITAL OUT OPTICAL and COAXIAL connectors.
- ON: Normally select this position. When you select "ON," set "DOLBY DIGITAL," "MPEG" and "DTS." For details on setting them, see "Setting for the Signal to the Digital Output."
- OFF: when the player does not output the sound signals via DIGITAL OUT OPTICAL and COAXIAL connectors, if you select this position, the influence of the digital circuit upon the analog one is minimum.

Notes
- When you play the sound tracks with 96 kHz sampling frequency, the output signals from the DIGITAL OUT (OPTICAL, COAXIAL) are converted to 48 kHz (sampling frequency). Sampling Frequency stays at 96kHz only when the signals are output from AUDIO OUT connector.
- When you select "OFF," you cannot set "DOLBY DIGITAL," "MPEG" and DTS."

Setting for the Signal to the Digital Output

When you select "ON," set "DOLBY DIGITAL," "MPEG" and DTS."
Switches the methods of outputting audio signals when you connect a digital component such as a receiver (amplifier) having a digital connector, an audio component having a built-in DTS decoder, a DAT or MD via the DIGITAL OUT OPTICAL or COAXIAL connector using an optical or coaxial digital connecting cord. For details on the connection, see page 13.



■DOLBY DIGITAL
Selects output Dolby Digital (AC-3) signals via the DIGITAL OUT OPTICAL and COAXIAL connectors. You cannot select this item when you set "DIGITAL OUT" to "OFF."
- D-PCM (Downmix PCM): when you play the Dolby Digital (AC-3) sound tracks, the output audio signals are mixed down to 2 channels. With the settings of the item "DOWN MIX" in "AUDIO SETUP," you can select whether the signals conform to Dolby surround (Pro Logic) or not.
- DOLBY DIGITAL: when the player is connected to an audio component with a built-in Dolby Digital (AC-3) decoder.

> **Note**
> If the player is connected to an audio component lacking a built-in Dolby Digital (AC-3) decoder, do not set "DOLBY DIGITAL" in "AUDIO SETUP" to "DOLBY DIGITAL." Otherwise, when you play the Dolby Digital (AC-3) sound track, a loud noise or no sound will come out from the speakers, affecting your ears or causing the speakers to be damaged.

Settings and Adjustments

■MPEG
Selects output MPEG AUDIO signals via the DIGITAL OUT OPTICAL and COAXIAL connectors. You cannot select this item when you set "DIGITAL OUT" to "OFF."
- PCM: when the player is connected to an audio component lacking a built-in MPEG decoder. If you play MPEG AUDIO sound tracks, the player outputs stereo signals taken from MPEG AUDIO signals via the DIGITAL OUT OPTICAL and COAXIAL connectors.
- MPEG: when the player is connected to an audio component having a built-in MPEG decoder.

Note
If the player is connected to an audio component lacking a built-in MPEG decoder, do not set "MPEG" in "AUDIO SETUP" to "MPEG." Otherwise, when you play the MPEG AUDIO sound track, a loud noise will come out from the speakers, affecting your ears or causing the speakers to be damaged.

Note
The player outputs the MPEG analog audio sound only from the front speakers when you set "DIGITAL OUT" in "AUDIO SETUP" to "ON" and then set "MPEG" to "MPEG."

■DTS
Selects output DTS signals via the DIGITAL OUT OPTICAL and COAXIAL connectors. You cannot select this item when you set "DIGITAL OUT" to "OFF."
- OFF: when the player is connected to an audio component lacking a built-in DTS decoder.
- ON: when the player is connected to an audio component having a built-in DTS decoder.

Note
Select the setting correctly. Otherwise, no sound or strange sound will come out from the speakers, affecting your ears or causing the speakers to be damaged.

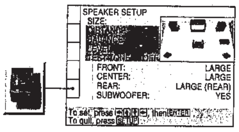
- **Do not play the DTS sound tracks without connecting the player to an audio component having a built-in DTS decoder. You cannot hear the DTS sound unless you connect the player to an audio component having a built-in DTS decoder.**
- **When you play the DTS sound track on a CD, a loud noise will come out from the AUDIO OUT, 5.1CH OUTPUT (FRONT L/R) and PHONES connectors, affecting your ears or causing the speakers or headphones to be damaged.**
- **When you play the DTS sound track on a DVD, no sounds will come out from the AUDIO OUT, 5.1CH OUTPUT (FRONT L/R) and PHONES connectors.**

Notes on playing the DTS sound tracks on a CD
- Do not play the DTS sound tracks without connecting the player to an audio component having a built-in DTS decoder. The player output the DTS signal via the DIGITAL OUT OPTICAL and COAXIAL connectors even if "DTS" in "AUDIO SETUP" is set to "OFF" in the setup display, affecting your ears or causing the speakers to be damaged.
- The DTS indicator on the front panel does not light up even if the player outputs DTS signal via the DIGITAL OUT OPTICAL and COAXIAL connectors.
- Set the sounds to "STEREO" when you play the DTS sound tracks on a CD. (See "Changing the Sounds" on page 33.) If you set the sounds to "1/L" or "2/R", no sounds will come out from the DIGITAL OUT OPTICAL and COAXIAL connectors.

Notes on playing the DTS sound tracks on a DVD
- No sounds will come out from the AUDIO OUT and PHONES connectors.
- If the player is connected to an audio component lacking a built-in DTS decoder, do not set "DTS" in "DIGITAL OUT" to "ON" in the setup display. Otherwise, when you play the DTS sound track, a loud noise will come out from the speakers, affecting your ears or causing the speakers to be damaged.
- When you set "DTS" in "AUDIO SETUP" to "OFF", no sound will come out from the DIGITAL OUT OPTICAL and COAXIAL connectors even if you play DTS sound tracks on DVDs.

Speaker Set Up

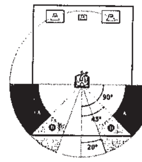
Select "SPEAKER SETUP" after pressing SET UP.
To obtain the best possible surround sound, first specify the size of speakers you have connected and their distance from your listening position and set the balance and level. Then use the test tone to adjust the speaker volumes to the same level.
For the speaker hook ups, see pages 14 to 15.



■SIZE
Selects the size of the speakers to be connected.
- FRONT
  —LARGE: Normally select this.
  —SMALL: When the sound cracks or the effects of the surround is difficult to hear, select this. This activates the Dolby Digital (AC-3) bass redirection circuitry and outputs the bass frequencies of the speaker from subwoofers.
- CENTER
  —NONE: If you will not connect a center speaker, select this.
  —LARGE: Normally select this.
  —SMALL: When the sound cracks, select this. This activates the Dolby Digital (AC-3) bass redirection circuitry and outputs the bass frequencies of the speaker from some other speakers .
- REAR
  —NONE: If you will not connect a rear speaker, select this.
  —LARGE (REAR*/SIDE*): Normally select this.
  —SMALL (REAR*/SIDE*): When the sound cracks or the effects of the surround is difficult to hear, select this. This activates the Dolby Digital (AC-3) bass redirection circuitry and outputs the bass frequencies of the speaker from some other speakers .
- SUBWOOFER
  —NONE: If you do not connect a subwoofer, select this. This activates the Dolby Digital (AC-3) bass redirection circuitry and outputs the LFE signals from the front speakers.
  —YES: If you connect a subwoofer, select this to output the LFE (low frequency effects) channel from the subwoofer.

* Rear speaker position (REAR/SIDE)
These items let you specify the location of your rear speakers for proper implementation of "VIRTUAL REAR SHIFT" and "VIRTUAL MULTI REAR" in the Control Menu display. Refer to the illustration below.
- Set to "SIDE" if the location of your rear speakers corresponds to section A.
- Set to "REAR" if the location of your rear speakers correcponds to section B.

This setting effects only the "VIRTUAL REAR SHIFT" and "VIRTUAL MULTI REAR" mode.



Notes
- When you select an item, the sound cuts off for a moment.
- The cut off frequency for the subwoofer is fixed at 100Hz.
- Set the subwoofer's cut off frequency as high as possible.
- Depending on the settings of other speakers, the subwoofer may output excessive sound.
- If your speakers are too small to reproduce low bass frequencies, please set all speaker settings to "SMALL" and utilize a subwoofer for low frequency sound.

■DISTANCE
You can vary the distance of each speaker as follows. Default adjustments are in the parentheses.
- FRONT (3.6m)
  Front speaker distance can be set in 0.2 meter steps from 1 to 15 meters.
- CENTER (3.6m)
  Center speaker distance can be set in 0.2 meter steps from a distance 0.6 meter farther to the front speaker to a distance 1.5 meters closer to your listening position.
- REAR (3.0m)
  Rear speaker distance can be set in 0.2 meter steps from a distance equal to the front speaker distance to a distance 5 meters closer to your listening position.

Notes
- When you set the distance, the sound cuts off for a moment.
- If each of the front or rear speakers are not placed an equal distance from your listening position, set the distance of the closest speaker.
- Do not place the rear speaker farther away from your listening position than the front speakers.

■BALANCE
You can vary the balance of each speaker as follows. Default adjustments are in the parentheses.
- FRONT (0dB)
  Adjust the balance between the front left and right speakers (-6dB [L] to +6dB [R], 0.5dB steps).
- REAR (0dB)
  Adjust the balance between the rear left and right speakers (-6dB [L] to +6dB [R], 0.5dB steps).

Note
When you select "VES A" or "VES B" in "VIRTUAL 3D SURROUND" in the Control Menu display, you cannot adjust the level or the balance of the speakers except for the front speakers.

■LEVEL
You can vary the level of each speaker as follows. Default adjustments are in the parentheses.
- CENTER (0dB)
  Adjust the level of the center speaker (-6dB to +6dB, 0.5dB steps).
- REAR (0dB)
  Adjust the level of the rear speakers (-6dB to +6dB, 0.5dB steps).
- SUBWOOFER (0dB)
  Adjust the level of the subwoofer (-10dB to +6dB, 0.5dB steps).

■TEST TONE
You can hear the test tone from each speaker in sequence.
- OFF: The test tone is not emitted from speakers.
- ON: During adjustment of "BALANCE" or "LEVEL," the test tone is emitted from both speakers simultaneously.

Note
While you are playing a disc, you cannot hear the test tone. Execute the test tone after you stop playback.

To adjust the volume of all the speakers at one time
Use the receiver's (amplifier's) volume control.

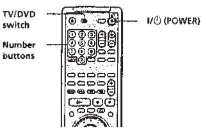
To return to the default setting
Select the item, then press CLEAR.

Adjusting the speaker volume

1. **While you stop playback, select "SPEAKER SETUP" after pressing SET UP.**
2. **Select "TEST TONE" and set "TEST TONE" to "ON."**
   You will hear the test tone from each speaker in sequence.
3. **From your listening position, select "BALANCE" or "LEVEL" and adjust the value of "BALANCE" and "LEVEL" using ↑/↓.**
   During this adjustment, the test tone is emitted from both speakers simultaneously.
4. **Select "TEST TONE" and set "TEST TONE" to "OFF" to turn off the test tone.**

Controlling the TV or the AV Receiver (Amplifier) with the Supplied Remote

If you adjust the remote signal, you can control your TV with the supplied remote. Default setting is to control Sony TVs with the mark.
When you connect the player to a Sony AV receiver (amplifier), you can also set the input of the receiver (amplifier) to this player with the supplied remote.



Controlling TVs with the remote

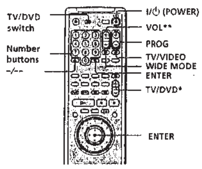
1. **Slide TV/DVD switch to TV.**
2. **Hold down I/⏻ (POWER), and enter your TV's manufacturer's code (see the table) using the number buttons. Then release I/⏻ (POWER).**

Code numbers of controllable TVs
If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Notes
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote commander, the code number automatically resets to 01 (Sony). Reset the appropriate code number.

Manufacturer	Code number
Sony (default)	01
Grundig	11
Hitachi	24
Loewe	45
Nokia	15,16,69
Panasonic	17,49
Philips	06,07,08
Saba	12,13
Samsung	22,23
Sanyo	25
Sharp	29
Telefunken	36
Thomson	43
Toshiba	38

When you set the TV/DVD switch to TV, you can control your TV using the keys below.



By pressing	You can
I/⏻ (POWER)	Turn the TV on or off
TV/VIDEO	Select the input source for the TV between the TV and VCR
TV/DVD*	Select the input source for the TV between the TV and CD/DVD player
VOL**	Adjust the volume of the TV
PROG	Select the program position of the TV
WIDE MODE	Switch the wide picture on or off
Number buttons and ENTER	Select the program position of the TV

* If you connect the player to the TV via the EURO AV OUT connectors, the input source for the TV is set to the player automatically when you start playback or press any button. In this case, press TV/DVD to return the input to the TV.
** You can control the TV regardless of the position of the TV/DVD switch.

Notes
- Depending on the TV, you may not be able to control your TV or to use some of the buttons above.
- If you use number buttons to select program position of the TV, press -/-- followed by the number buttons for two-digit numbers.

Controlling an AV receiver (amplifier) with the remote

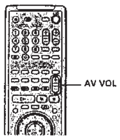
1 Slide TV/DVD switch to DVD.

2 Hold down I/⏻ (POWER), and enter your AV receiver's manufacturer's code (see the table below) using the number buttons. Then release I/⏻ (POWER).

Manufacturer	Code number
Sony	91(default), 88, 89
Denon	84, 85, 86
Kenwood	92, 93
Onkyo	81, 82, 83
Pioneer	99
Sunsui	87
Technics	97, 98
Yamaha	94, 95, 96

Code numbers of controllable receivers (amplifiers)
If more than one code number is listed, try entering them one at a time until you find the one that works with your receiver.

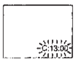
You can also change the sound volume of the AV receiver using AV VOL.



Notes
- Depending on the AV receiver (amplifier), you may not be able to control your AV receiver (amplifier).
- You can control the AV receiver (amplifier) regardless of the position of the TV/DVD switch.

Self-diagnosis function

When the self-diagnosis function works to prevent the player from malfunctioning, a five-character service number (combination of a letter and digits) flashes on the screen. In this case, check the following table.



First three characters	Cause and/or Corrective Action
C13	• The disc is dirty. ➡Clean the disc with a cleaning cloth. (page 6)
C31	• The disc is not inserted correctly. ➡Open the disc tray and insert the disc correctly.
Exx (xx is any number)	• To prevent the player from malfunctioning, the self-diagnosis function has worked. ➡When you contact your Sony dealer or local authorized Sony service facility, give the 5-character service number. (example: E:61:10)

Language Code List

For details, see page 34, 52.

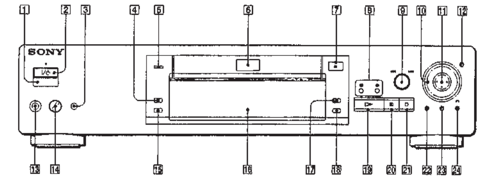
The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1186	Scots Gaelic	1350	Malayalam	1513	Siswati
1028	Abkhazian	1194	Galician	1352	Mongolian	1514	Sesotho
1032	Afrikaans	1196	Guarani	1353	Moldavian	1515	Sundanese
1039	Amharic	1203	Gujarati	1356	Marathi	1516	Swedish
1044	Arabic	1209	Hausa	1357	Malay	1517	Swahili
1045	Assamese	1217	Hindi	1358	Maltese	1521	Tamil
1051	Aymara	1226	Croatian	1363	Burmese	1525	Telugu
1052	Azerbaijani	1229	Hungarian	1365	Nauru	1527	Tajik
1053	Bashkir	1233	Armenian	1369	Nepali	1528	Thai
1057	Byelorussian	1235	Interlingua	1376	Dutch	1529	Tigrinya
1059	Bulgarian	1239	Interlingue	1379	Norwegian	1531	Turkmen
1060	Bihari	1245	Inupiak	1393	Occitan	1532	Tagalog
1061	Bislama	1248	Indonesian	1403	(Afan) Oromo	1534	Setswana
1066	Bengali; Bangla	1253	Icelandic	1408	Oriya	1535	Tonga
1067	Tibetan	1254	Italian	1417	Punjabi	1538	Turkish
1070	Breton	1257	Hebrew	1428	Polish	1539	Tsonga
1079	Catalan	1261	Japanese	1435	Pashto; Pushto	1540	Tatar
1093	Corsican	1269	Yiddish	1436	Portuguese	1543	Twi
1097	Czech	1283	Javanese	1463	Quechua	1557	Ukrainian
1103	Welsh	1287	Georgian	1481	Rhaeto-Romance	1564	Urdu
1105	Danish	1297	Kazakh	1482	Kirundi	1572	Uzbek
1109	German	1298	Greenlandic	1483	Romanian	1581	Vietnamese
1130	Bhutani	1299	Cambodian	1489	Russian	1587	Volapük
1142	Greek	1300	Kannada	1491	Kinyarwanda	1613	Wolof
1144	English	1301	Korean	1495	Sanskrit	1632	Xhosa
1145	Esperanto	1305	Kashmiri	1498	Sindhi	1665	Yoruba
1149	Spanish	1307	Kurdish	1501	Sangho	1684	Chinese
1150	Estonian	1311	Kirghiz	1502	Serbo-Croatian	1697	Zulu
1151	Basque	1313	Latin	1503	Singhalese	1703	Not specified
1157	Persian	1326	Lingala	1505	Slovak		
1165	Finnish	1327	Laothian	1506	Slovenian		
1166	Fiji	1332	Lithuanian	1507	Samoan		
1171	Faroese	1334	Latvian; Lettish	1508	Shona		
1174	French	1345	Malagasy	1509	Somali		
1181	Frisian	1347	Maori	1511	Albanian		
1183	Irish	1349	Macedonian	1512	Serbian		

Index to Parts and Controls

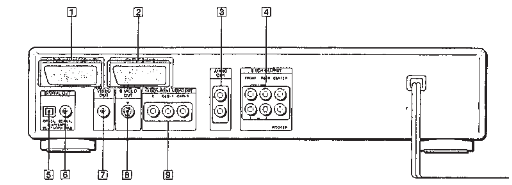
Refer to the pages indicated in parentheses for details.

Front Panel



1 ⊞ (remote sensor) (7)
Accepts the remote control signals.
2 I/⏻ (POWER) button and indicator (17)
Turns on and off the power of the player.
3 VIRTUAL 3D SURROUND button/indicator (37)
Selects the item of "VIRTUAL 3D SURROUND." Each time you press the button, the item changes.
When you do not set "VIRTUAL 3D SURROUND" to "OFF," the indicator lights up.
4 SHUFFLE button (40)
Displays the "SHUFFLE" display on the TV screen.
5 MULTICHANNEL indicator (36)
Lights up as follows:
– playing back multichannel surround sound such as Dolby Digital (AC-3) soundtrack and MPEG soundtrack
– the disc is not inserted
6 Disc tray (17)
Place a disc on the tray.
7 ⏏OPEN/CLOSE button (17)
Opens or closes the disc tray.
8 ⊖/⊕ SEARCH buttons (19)
Press to locate a scene.
9 ⏮/⏭ PREV/NEXT (DIRECT SEARCH dial) button (18)
Turn to select a chapter or track, and then press to go back to the selected chapter or track.
10 Click shuttle (19)
Changes the playback speed.
11 ←/↑/↓/→/ ENTER button
Selects and executes the items or settings.
12 JOG button / indicator (19)
Press to play a disc frame by frame.
13 PHONES connector (17)
Connect the headphones to this connector.
14 PHONE LEVEL control (17)
Adjusts the headphone volume.
15 PROGRAM button (38)
Displays the "PROGRAM" display on the TV screen.
16 Front Panel Display (23)
Indicates the playing time, etc.
17 REPEAT button (41)
Displays the "REPEAT" display on the TV screen.
18 CLEAR button (39, 40, 41)
Press to return to the continuous play, etc.
19 ▷PLAY button (17)
Plays a disc.
20 ⏸PAUSE button (18)
Pauses playing a disc.
21 ■STOP button (18, 20)
Stops playing a disc.
22 TITLE button (21)
Displays the title menu on the TV screen.
23 DVD MENU button (21)
Displays the DVD menu on the TV screen.
24 ↶ RETURN button (22, 26)
Press to return to the previously selected screen, etc.

Rear Panel



1 **EURO AV 1 (RGB)-TV connector (8, 54)**
Connects to the TV with EURO AV connector to output the signal from the player. You can select the video signals, the S VIDEO signals or the RGB signals as output signal format. Choose the appropriate one. (page 54)

2 **EURO AV 2 connector (8)**
Connects to the video equipment with EURO AV connector to input the signal from the equipment.

3 **AUDIO OUT connectors (9, 12)**
Connects to the audio input connector on the TV or receiver (amplifier).

4 **5.1CH OUTPUT connectors (15)**
Connects to a receiver (amplifier) having 5.1 channel input connectors.

5 **DIGITAL OUT (OPTICAL) connector (13)**
Connects to an audio component using the optical digital connecting cord.

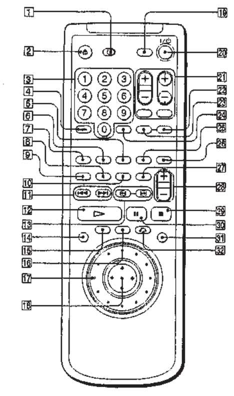
6 **DIGITAL OUT (COAXIAL) connector (13)**
Connects to an audio component using the coaxial digital connecting cord.

7 **VIDEO OUT connectors (8)**
Connects to the video input connector on the TV or monitor.

8 **S VIDEO OUT (1, 2) connectors (8, 12)**
Connects to the S video input connector on the TV or VCR.

9 **COMPONENT VIDEO OUT connectors (9)**
Connects to a monitor or projector having component video input connectors (Y, CB/B-Y, CR/R-Y) that conform to output signals from the player.

Remote



1 **TV/DVD switch (63)**
Selects to control the player or the TV with the remote.

2 **≜OPEN/CLOSE button (17)**
Opens or closes the disc tray.

3 **Number buttons**
Selects the items or settings.

4 **CLEAR / -/-- (ten's digit)button (39, 40, 41)**
Press to return to the continuous play etc.

5 **REPEAT button (41)**
Displays the "REPEAT" display on the TV screen.

6 **PROGRAM button (38)**
Displays the "PROGRAM" display on the TV screen.

7 **SHUFFLE button (40)**
Displays the "SHUFFLE" display on the TV screen.

8 **ANGLE button (35)**
Changes the angles when playing a DVD.

9 **AUDIO button (33)**
Changes the sound while playing a DVD or VIDEO CD.

10 **SUBTITLE button (34)**
Displays the SUBTITLE menu in the Control Menu display.

11 **|◀◀/▶▶|PREV/NEXT buttons (18)**
Press to go to the next chapter or track or to go back to the previous chapter or track.

12 **▷PLAY button (17)**
Plays a disc.

13 **◀◀/▶▶ (SEARCH) buttons (19)**
Press to locate a scene.

14 **DISPLAY button (25)**
Displays the Control Menu display on the TV screen to set or adjust the items.

15 **TITLE button (21)**
Displays the title menu on the TV screen.

16 **DVD MENU button (21)**
Displays the DVD menu on the TV screen.

17 **Click shuttle (19)**
Changes the playback speed.

18 **←/↑/↓/→/ ENTER button**
Selects and executes the items or settings.

19 **SET UP button (49)**
Displays the setup display on the TV screen to set or adjust the items.

20 **I/⏻ (POWER) button (17)**
Turns on and off the power of the player and TV.

21 **TV operation buttons (63, 64)**
Controls TVs.

22 **TIME/TEXT button (23)**
Displays the playing time of the disc, etc., on the front panel display.

23 **INPUT button (32)**
Press when labeling a disc.

24 **ENTER button**
Executes the items or settings.

25 **PICTURE MEMORY button (54)**
Press to store a picture in memory.

26 **TV/DVD button (64)**
Press to select the input source for the TV between the TV and CD/DVD player.

27 **BOOK MARK button (48)**
Press to set a bookmark.

28 **AV VOL button (64)**
Change the sound volume of the AV receivers (amplifiers).

29 **■STOP button (18, 20)**
Stops playing a disc.

30 **❚❚PAUSE button (18)**
Pauses playing a disc.

31 **JOG button / indicator (19)**
Press to play a disc frame by frame.

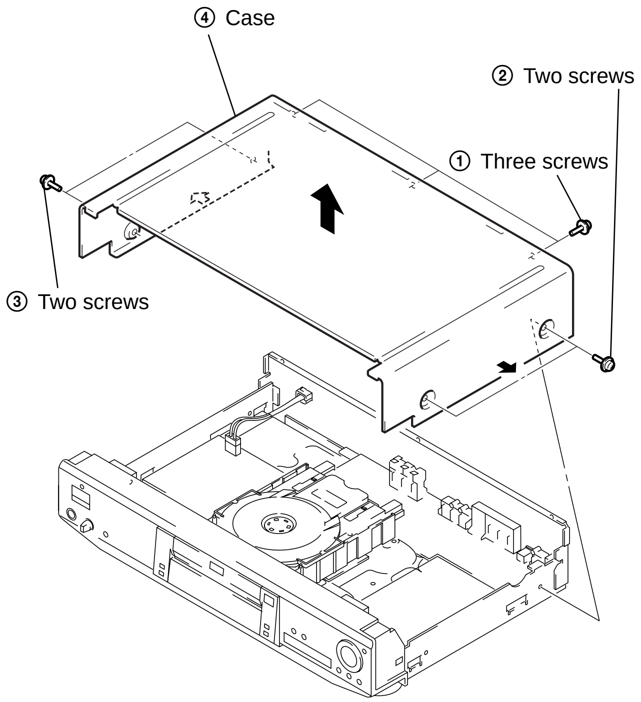
32 **↶RETURN button (22, 26)**
Press to return to the previously selected screen, etc.

Additional Information

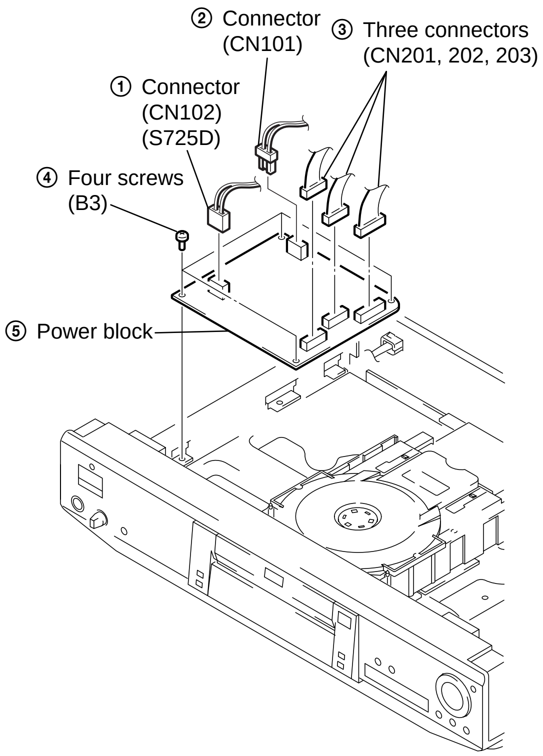
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

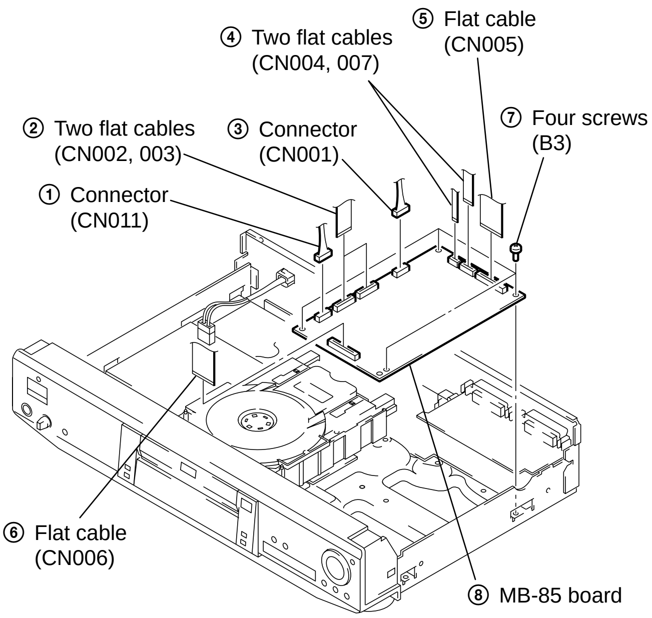
2-1. CASE REMOVAL



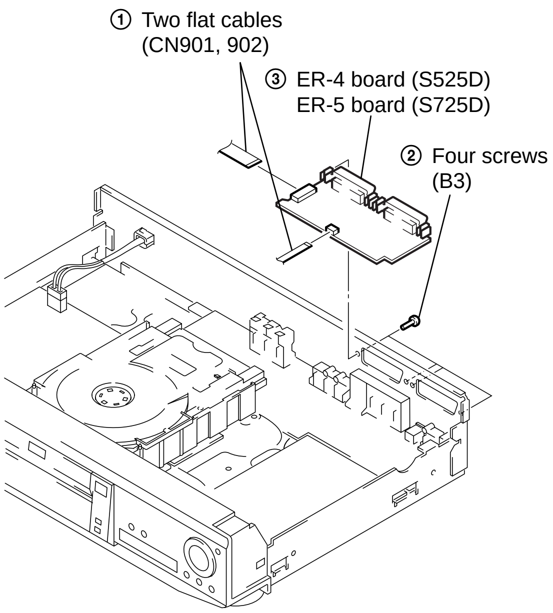
2-3. POWER BLOCK REMOVAL



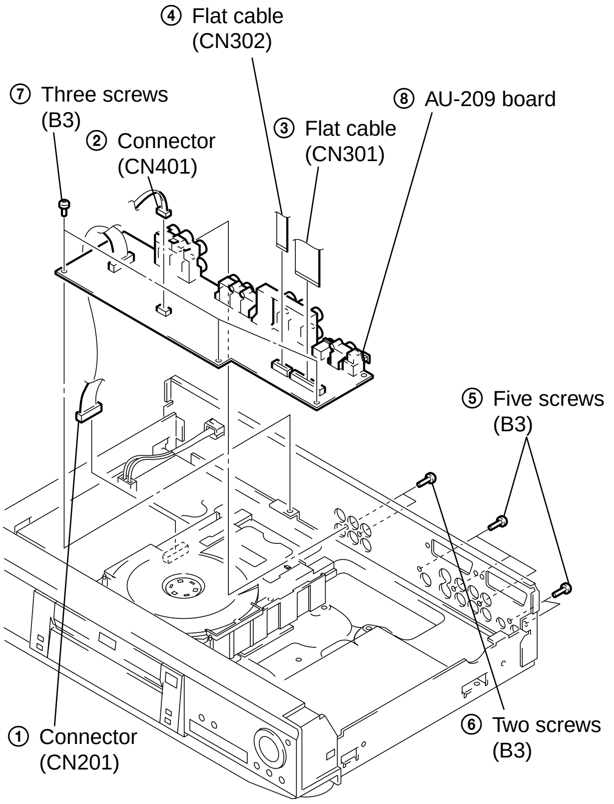
2-2. MB-85 BOARD REMOVAL



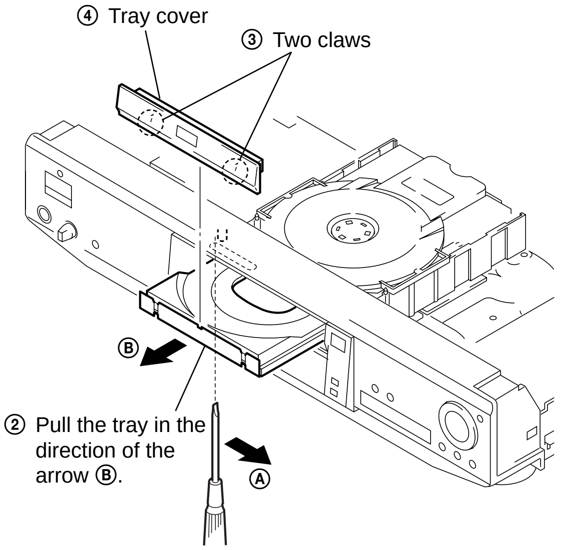
2-4. ER-4/5 BOARD REMOVAL



2-5. AU-209 BOARD REMOVAL (S525D)

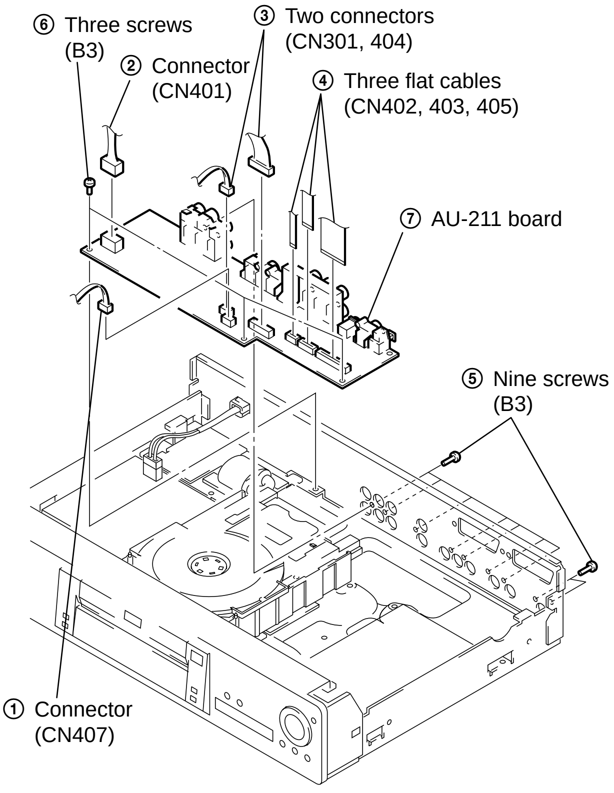


2-7. TRAY COVER REMOVAL

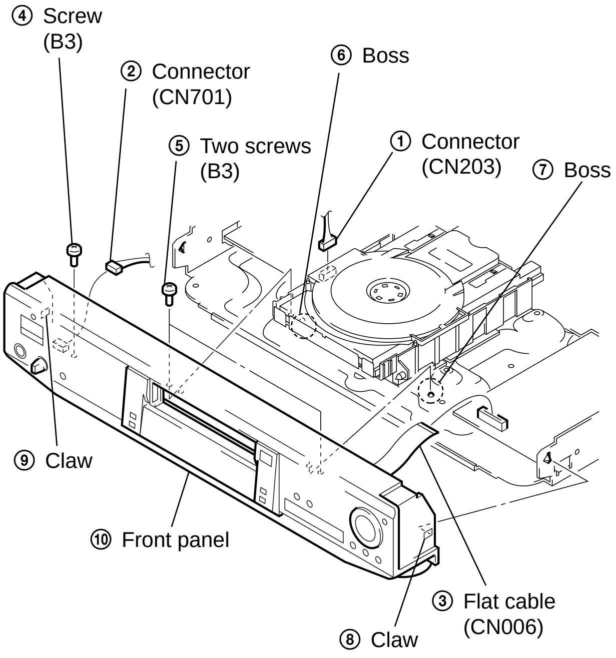


① Insert a tapering driver into the aperture of the unit bottom, and move the lever of chuck cam in the direction of the arrow Ⓐ.

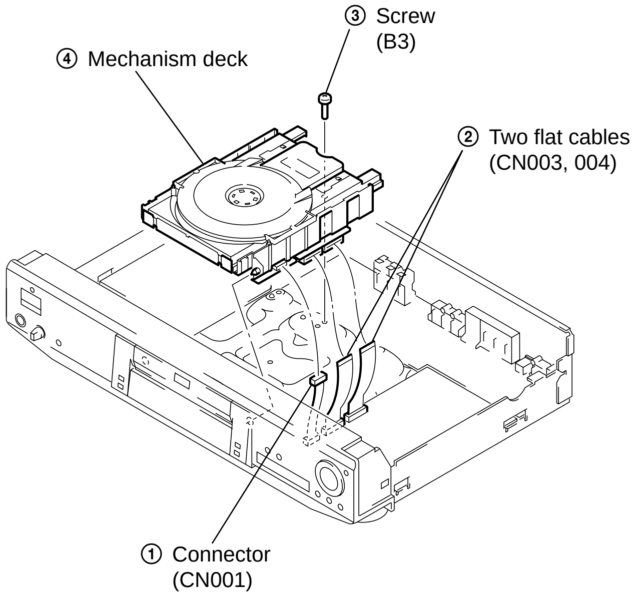
2-6. AU-211 BOARD REMOVAL (S725D)



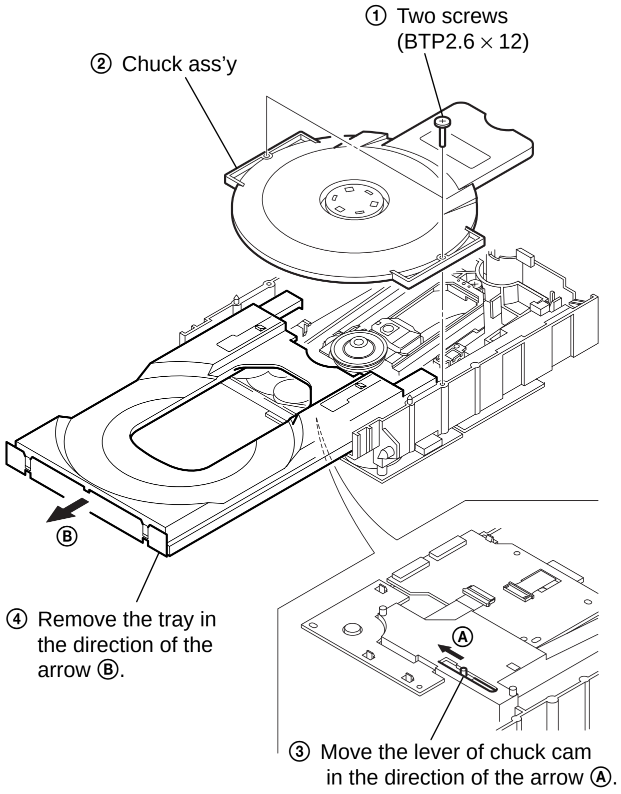
2-8. FRONT PANEL REMOVAL



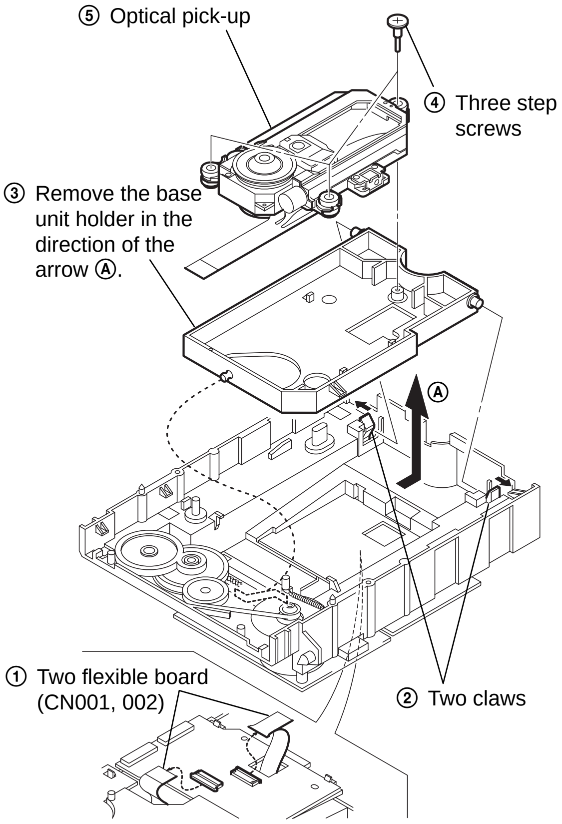
2-9. MECHANISM DECK REMOVAL



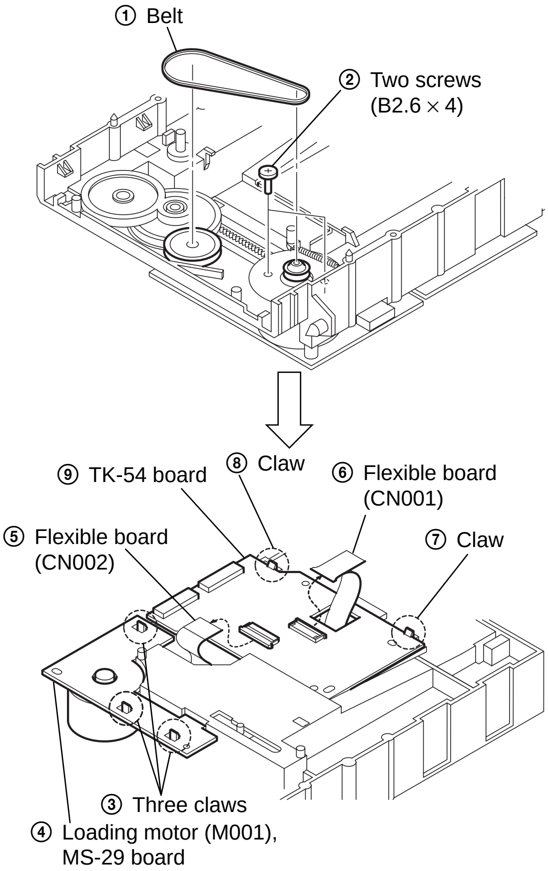
2-10. TRAY REMOVAL



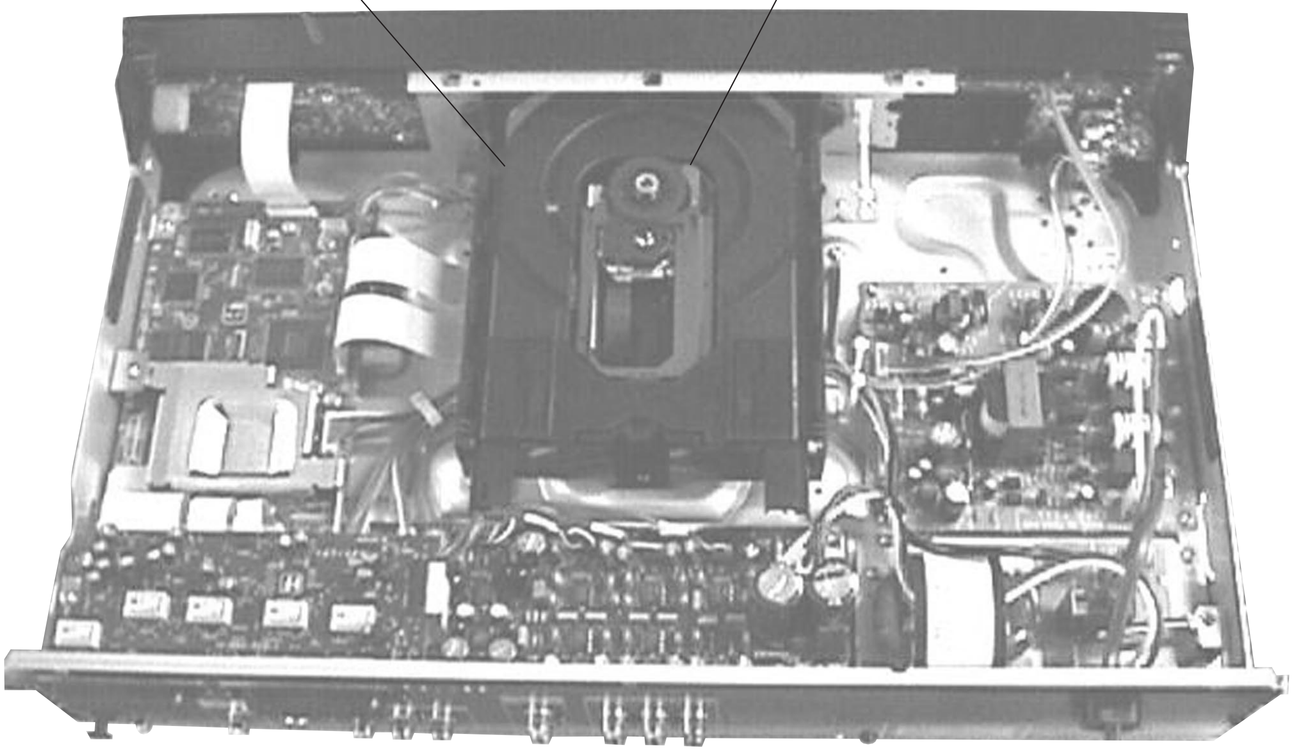
2-11. OPTICAL PICK-UP REMOVAL



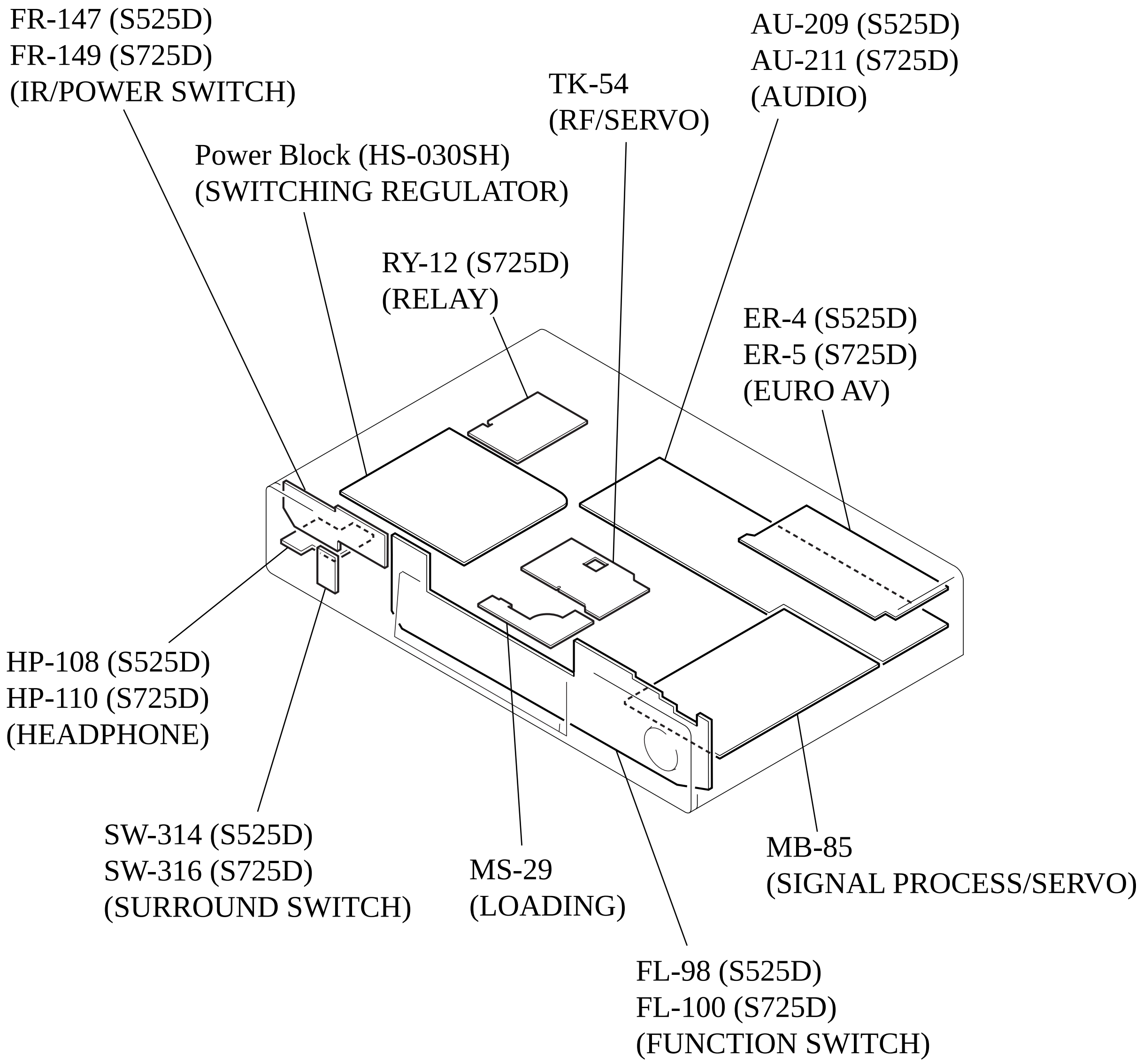
2-12. BELT, LOADING MOTOR (M001), MS-29/TK-54 BOARD REMOVAL



2-13. INTERNAL VIEW

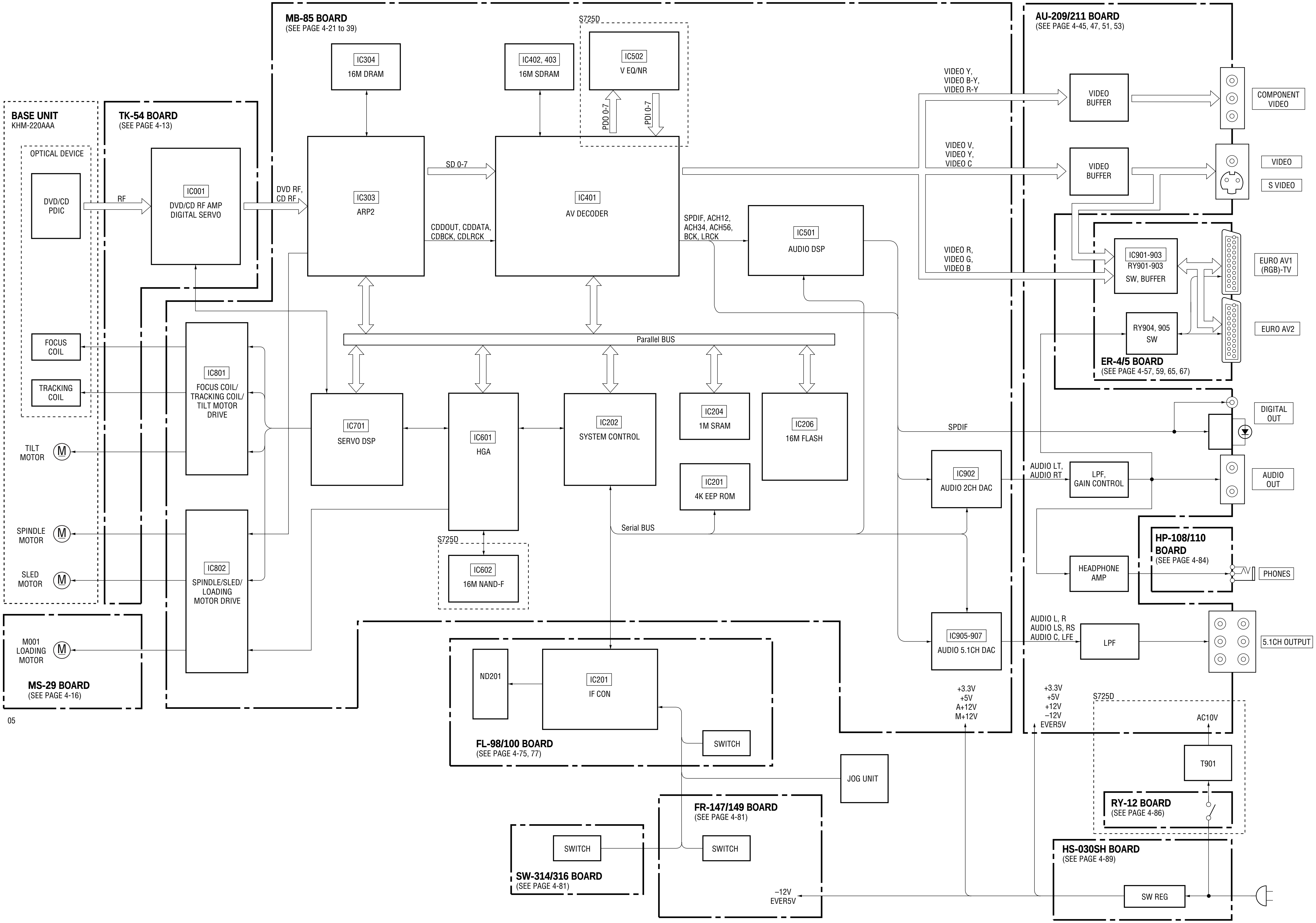


2-14. CIRCUIT BOARDS LOCATION

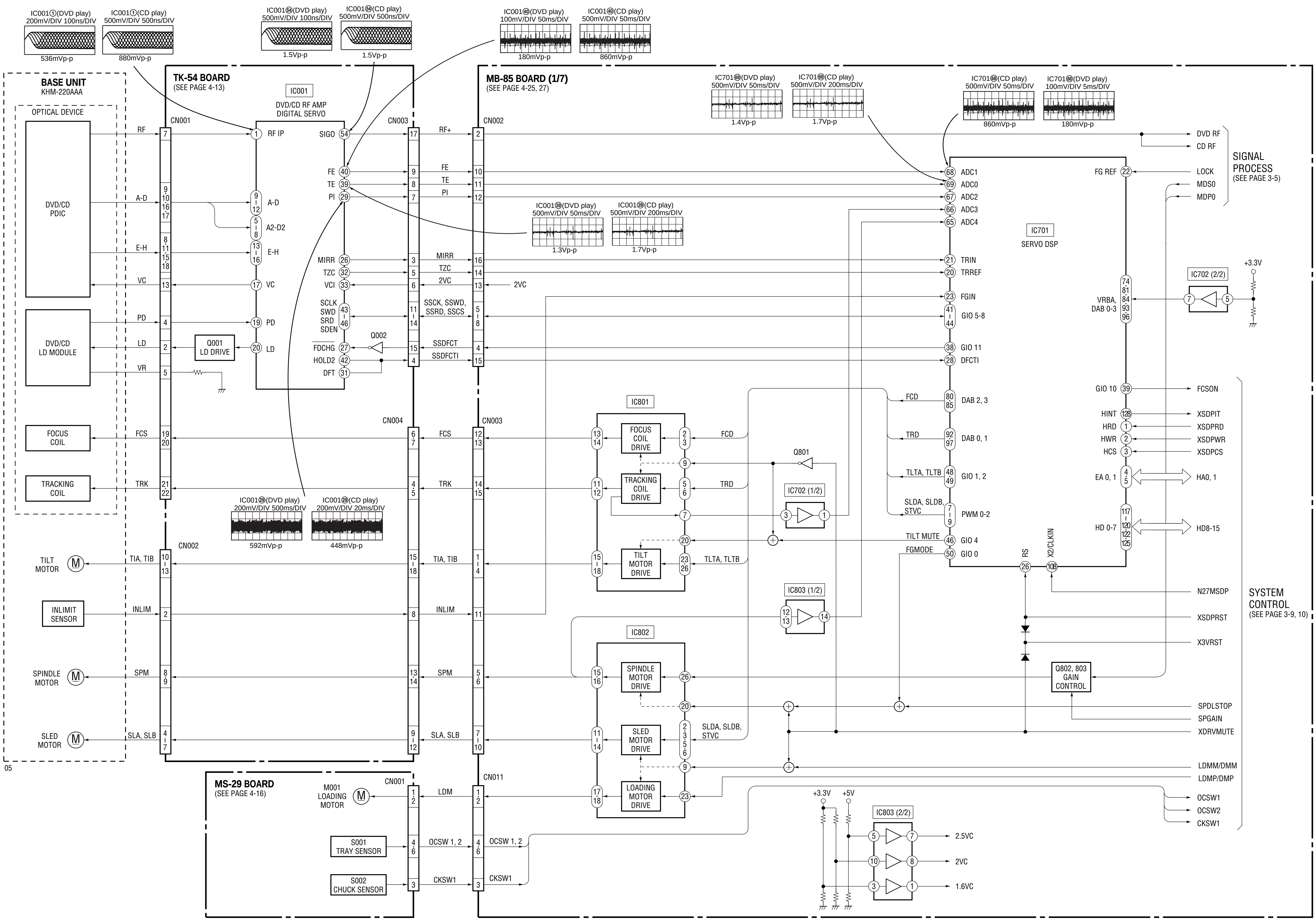


SECTION 3
BLOCK DIAGRAMS

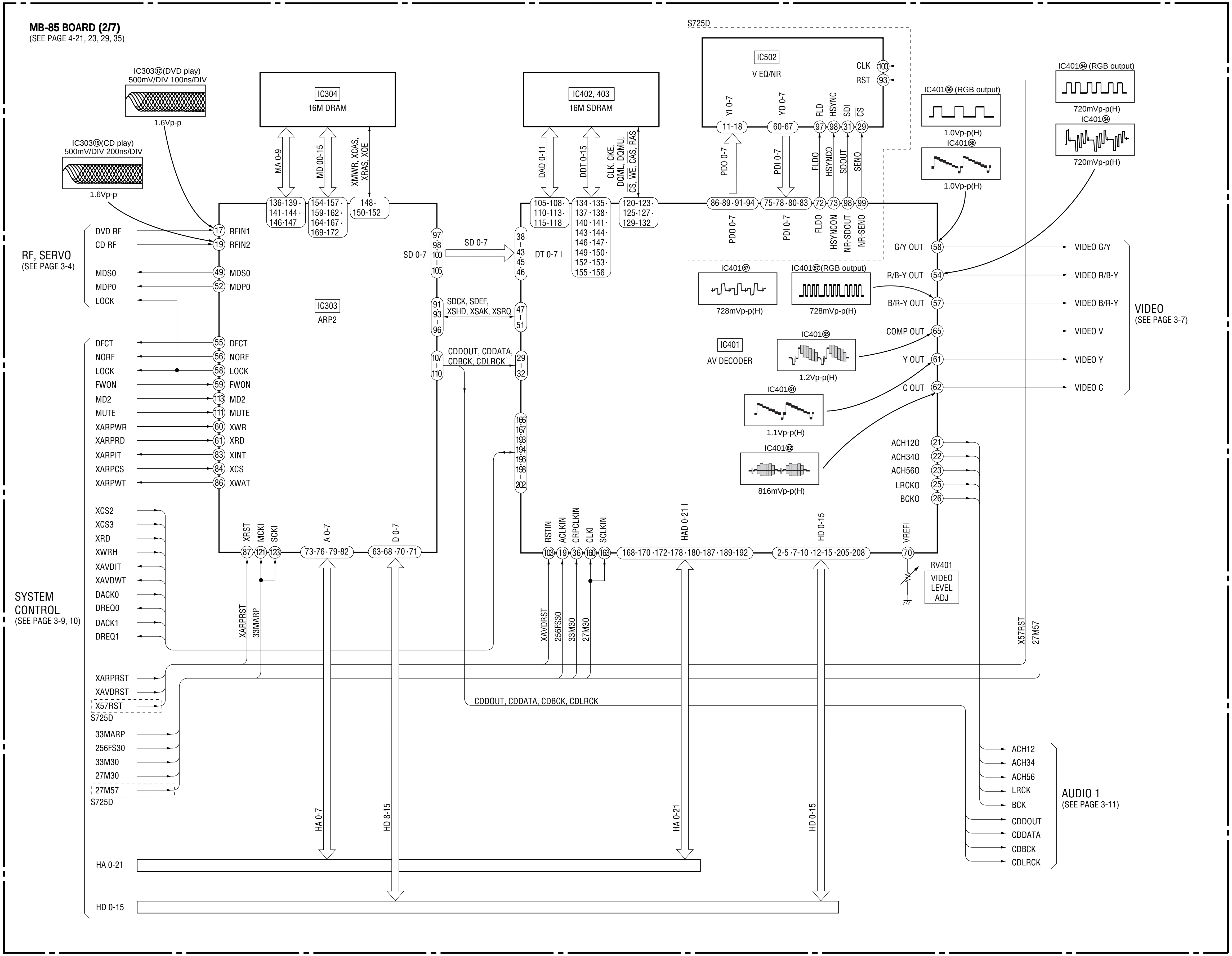
3-1. OVERALL BLOCK DIAGRAM



3-2. RF/SERVO BLOCK DIAGRAM

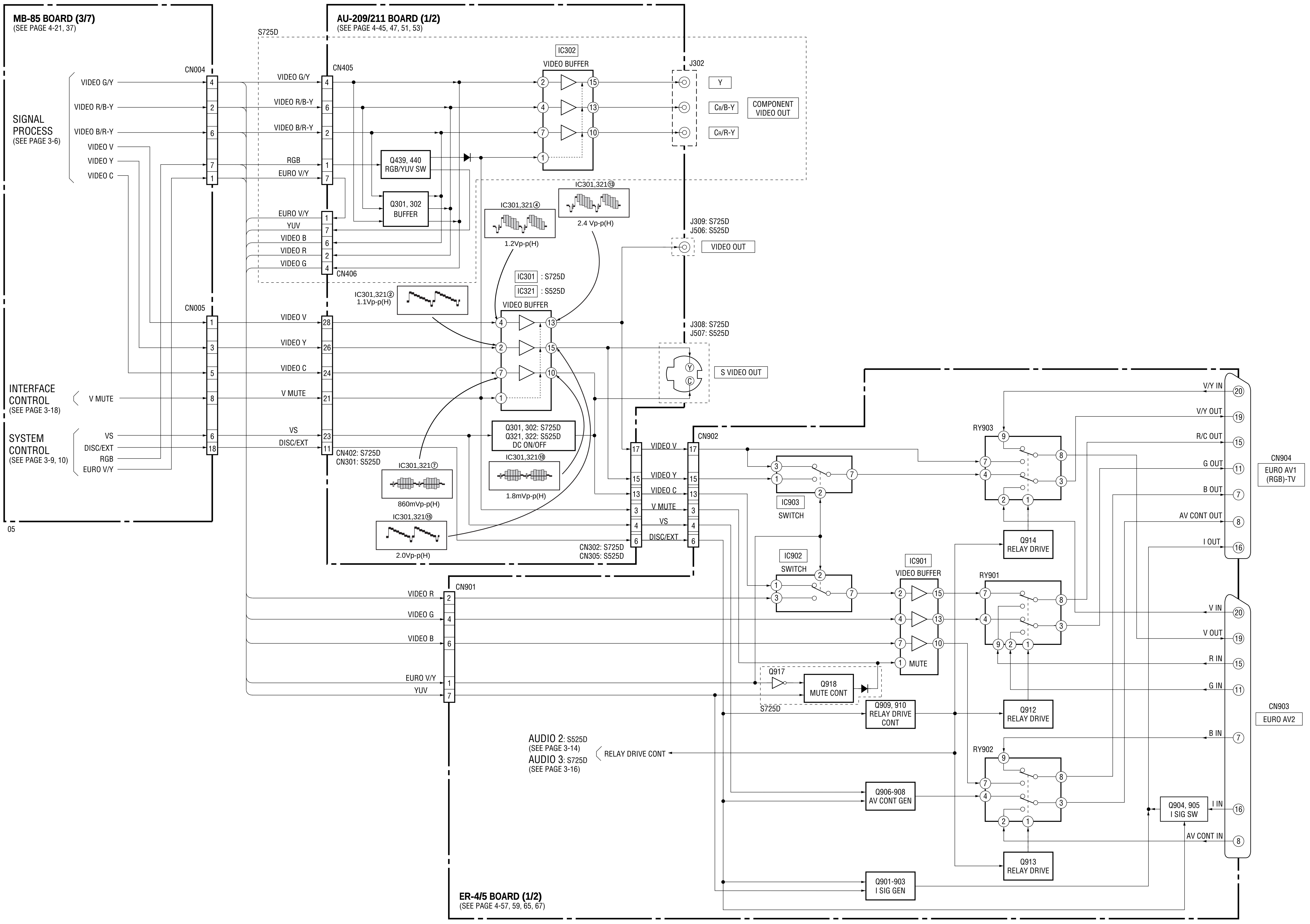


3-3. SIGNAL PROCESS BLOCK DIAGRAM

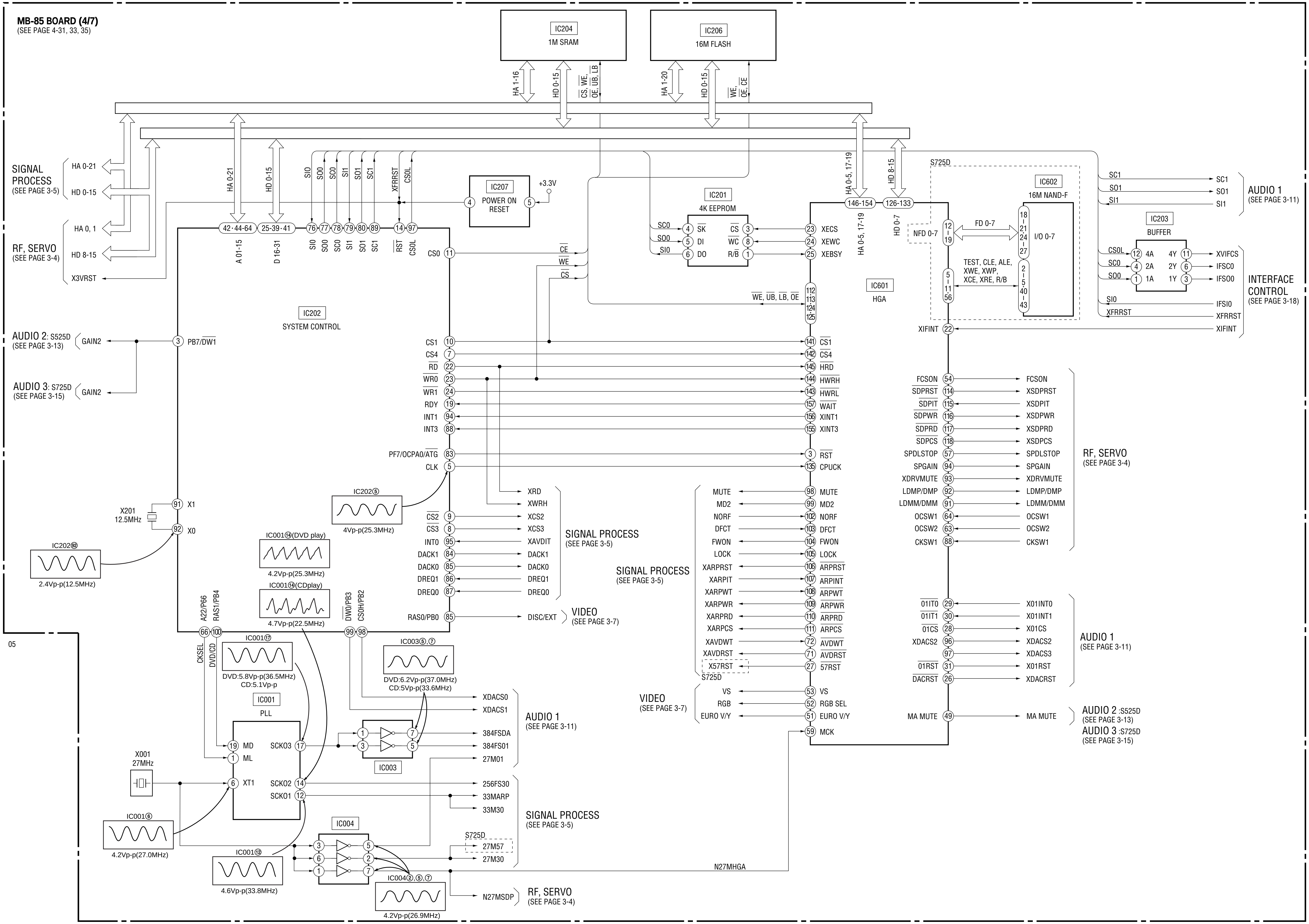


05

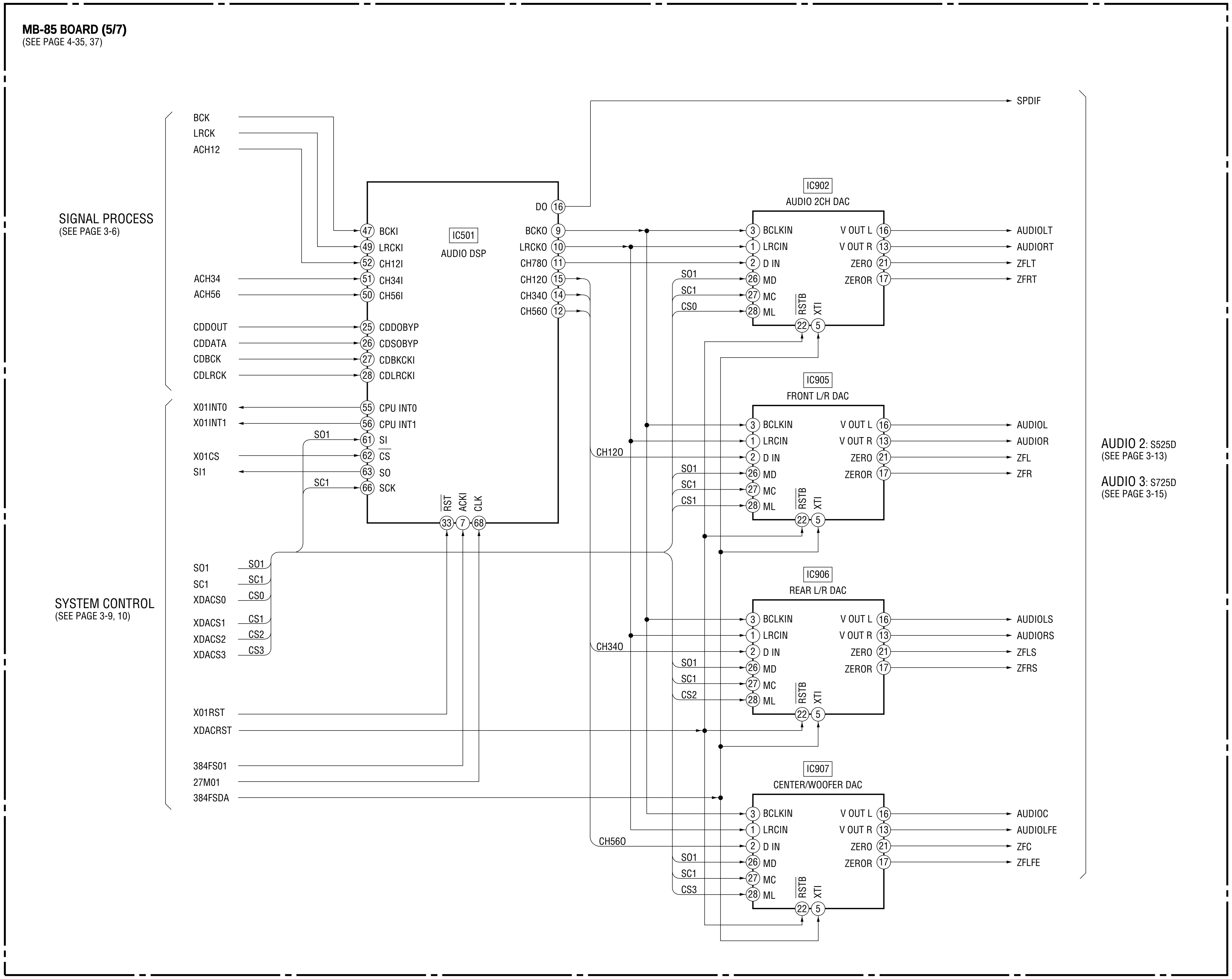
3-4. VIDEO BLOCK DIAGRAM



3-5. SYSTEM CONTROL BLOCK DIAGRAM

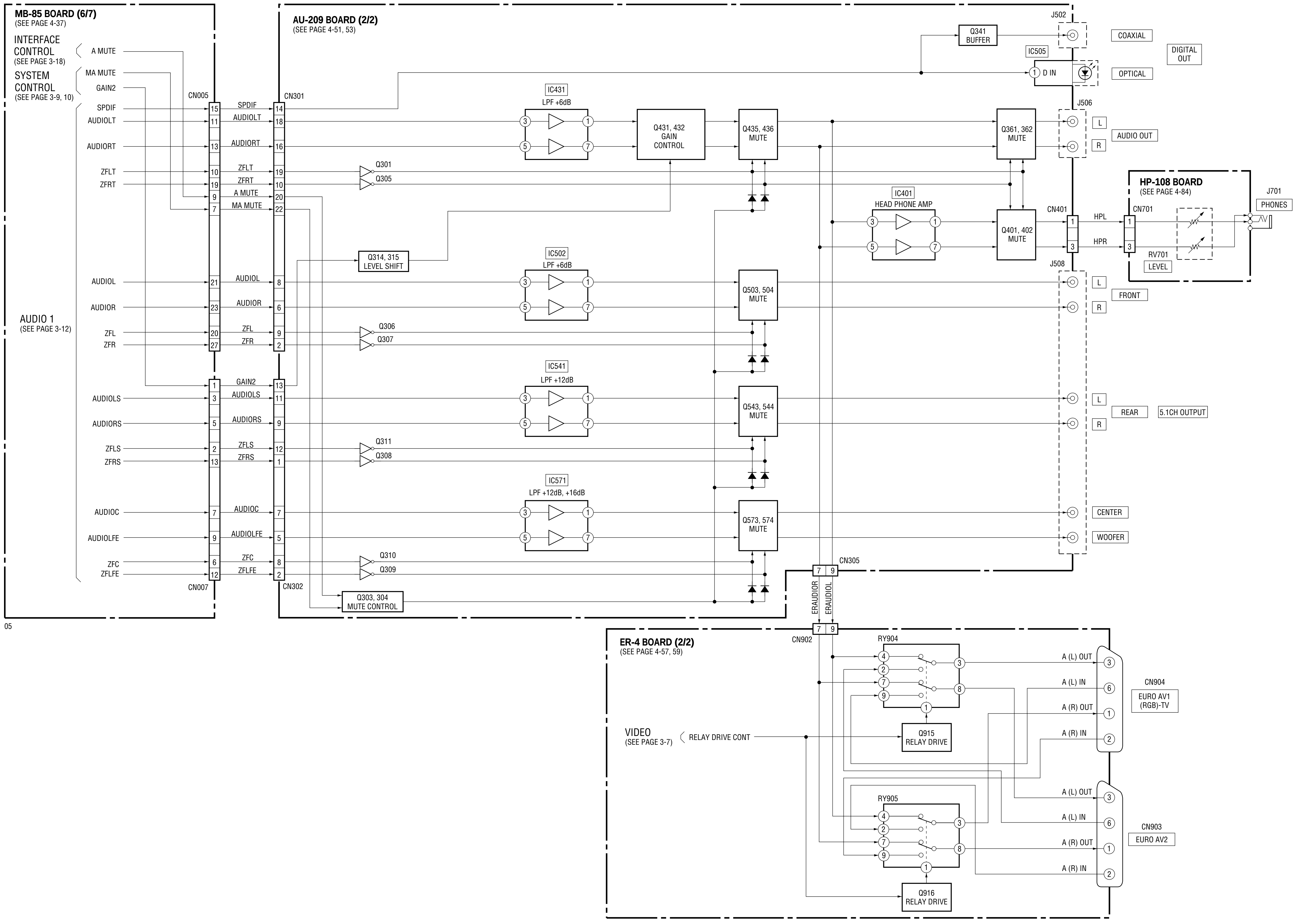


3-6. AUDIO (1) BLOCK DIAGRAM

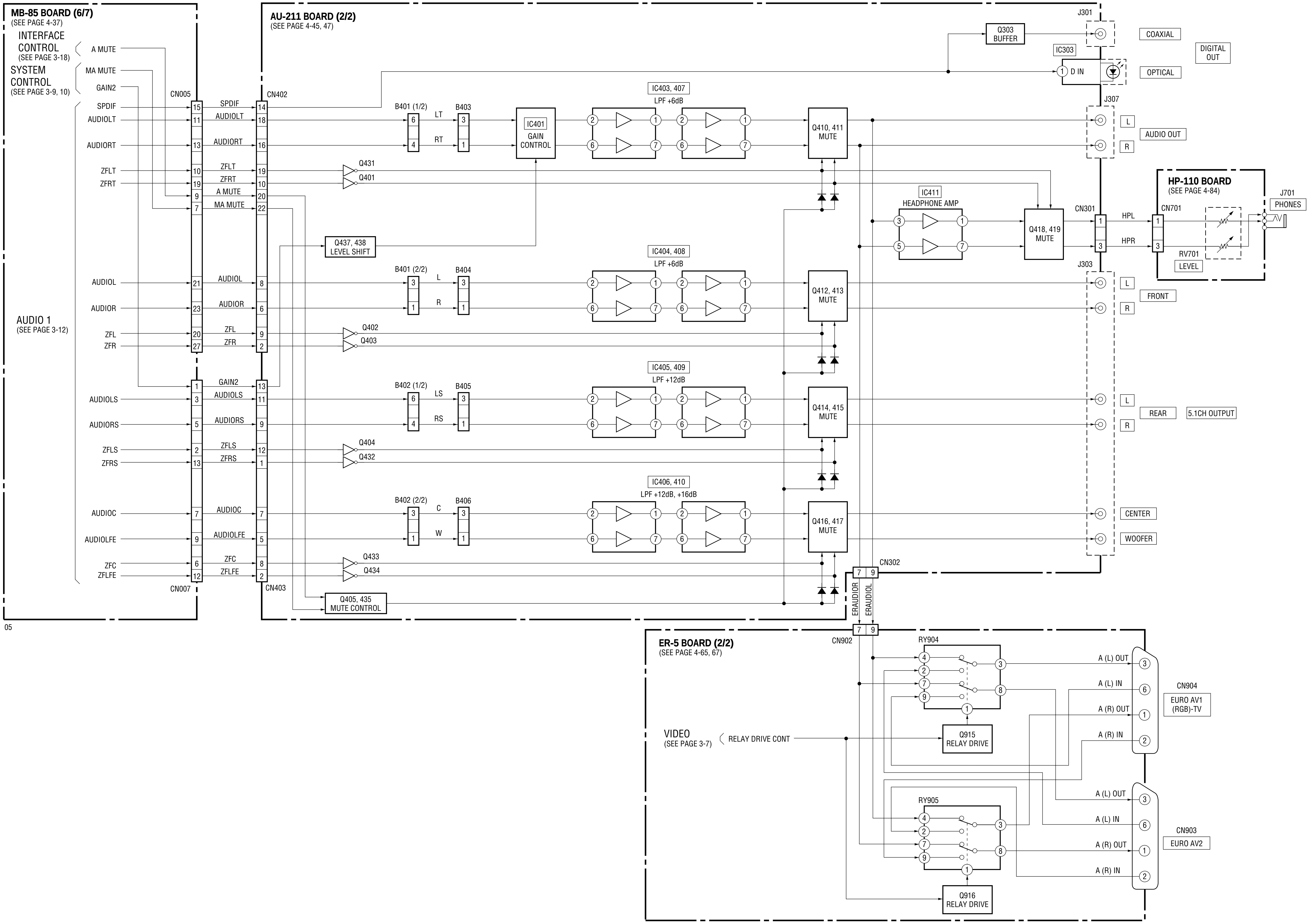


05

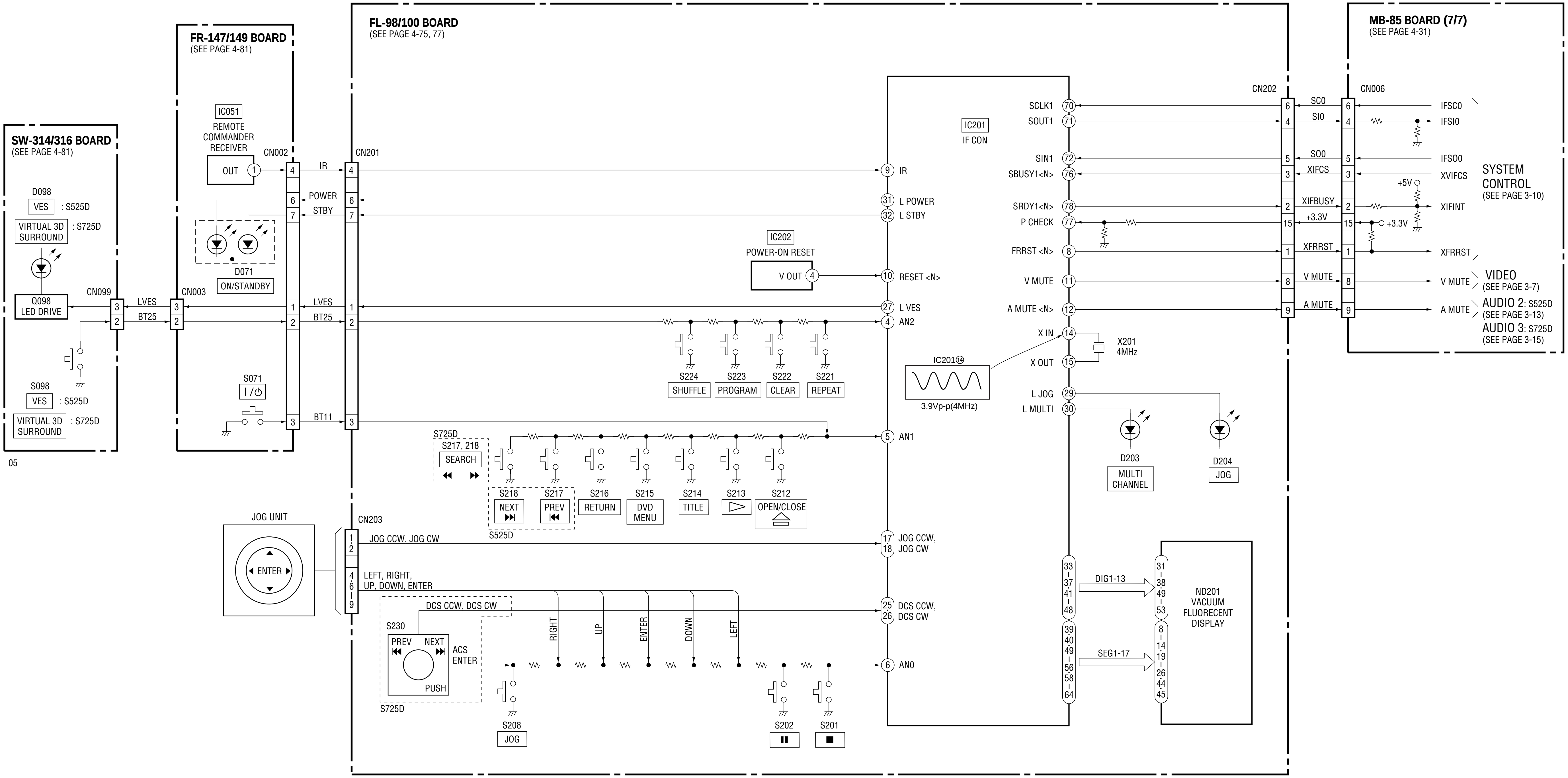
3-7. AUDIO (2) BLOCK DIAGRAM
– DVP-S525D –



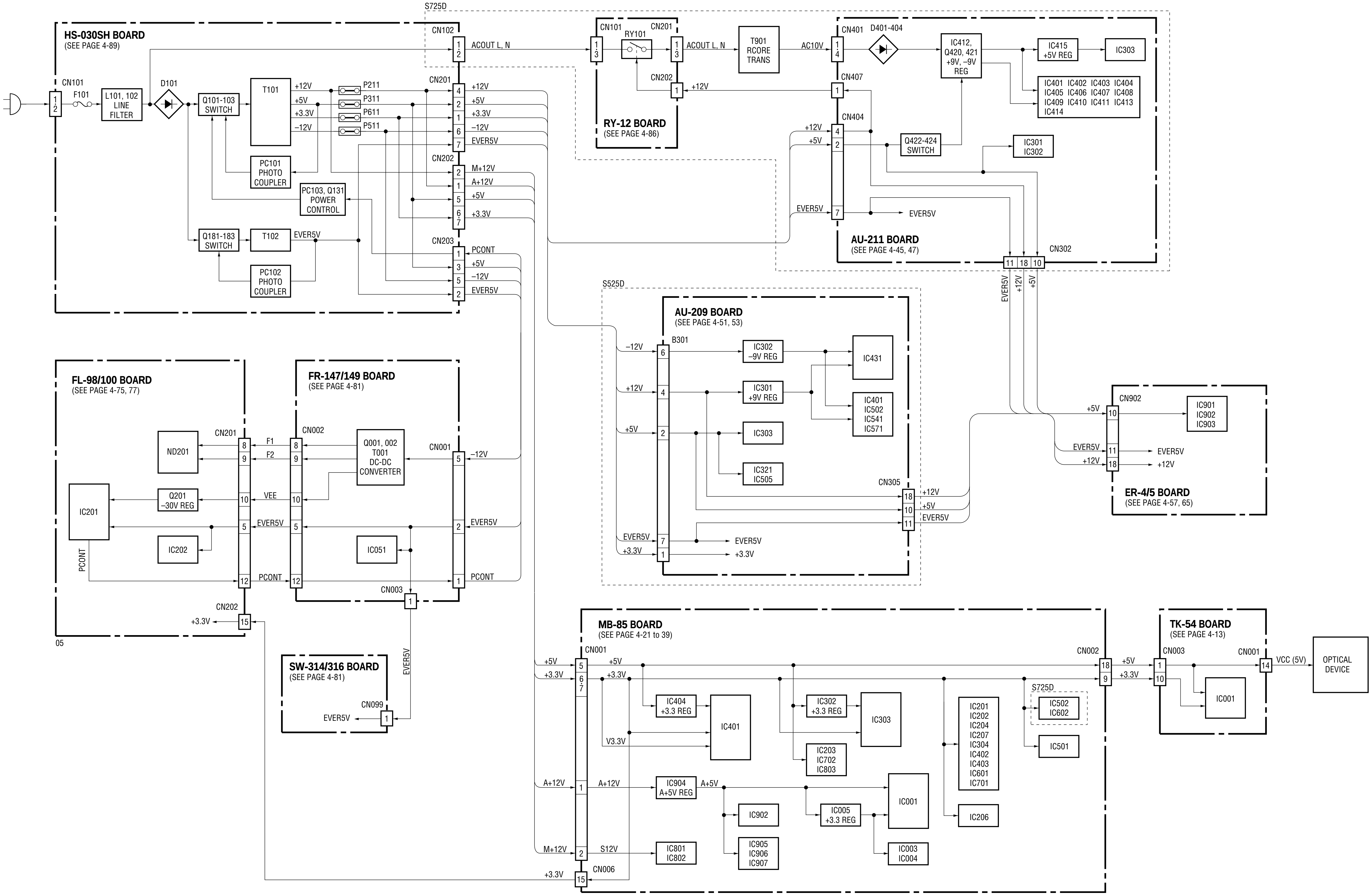
3-8. AUDIO (3) BLOCK DIAGRAM
– DVP-S725D –



3-9. INTERFACE CONTROL BLOCK DIAGRAM



3-10. POWER BLOCK DIAGRAM



SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block)

For printed wiring boards:
- ○——— : indicates a lead wire mounted on the component side.
- ●——— : indicates a lead wire mounted on the printed side.
- ○ : Through hole.
- ░░ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

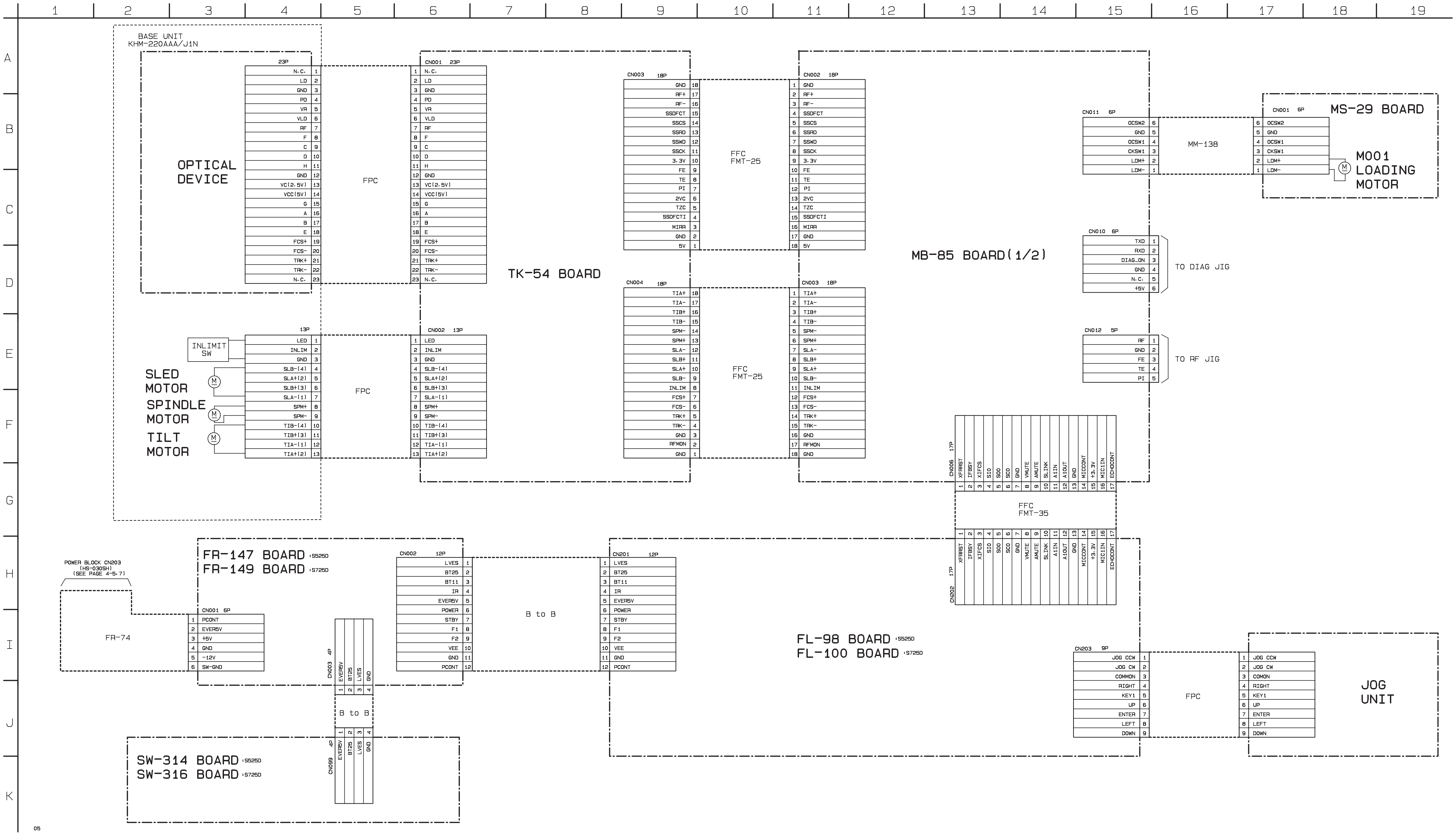
For schematic Diagram:
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4 W (Chip resistors : 1/10 W) unless otherwise specified.
  kΩ : 1000 Ω, MΩ : 1000 kΩ.
- All capacitors are in μF unless otherwise noted. pF : μμF 50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- ☐ : panel designation.
- △ : internal component.
- ☐ : adjustment for repair.
- B+ : B+ Line.
- B– : B– Line.
- Circled numbers refer to waveforms.
- Voltages are dc between measurement point.
- Readings are taken with a color-bar signals on DVD reference disc and when playing CD reference disc.
- Readings are taken with a digital multimeter (DC 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

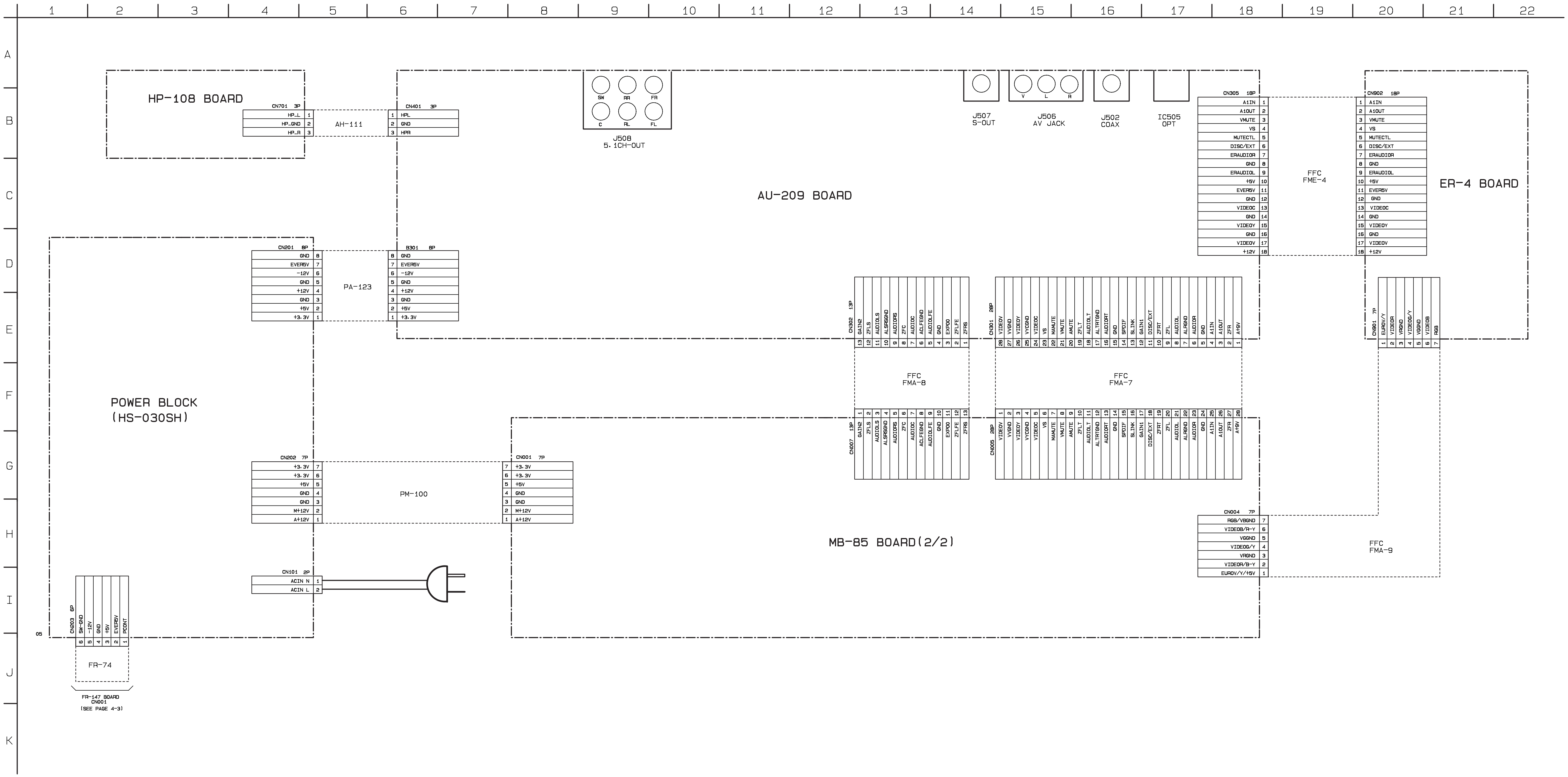
When indicating parts by reference number, please include the board name.

4-1. FRAME SCHEMATIC DIAGRAMS

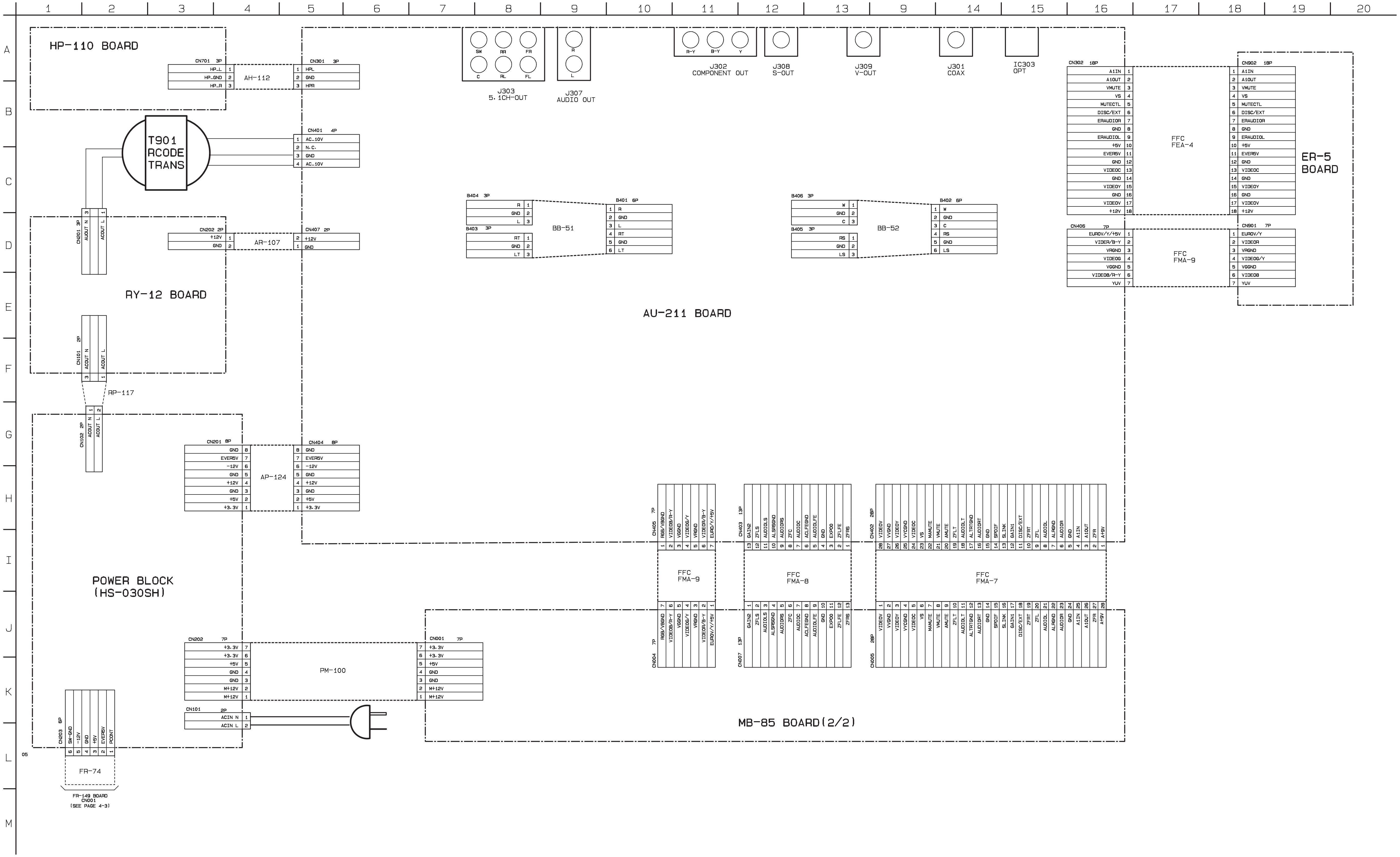
FRAME (1) SCHEMATIC DIAGRAM



FRAME (2) SCHEMATIC DIAGRAM
– DVP-S525D –



FRAME (3) SCHEMATIC DIAGRAM
– DVP-S725D –



FRAME (3/3)

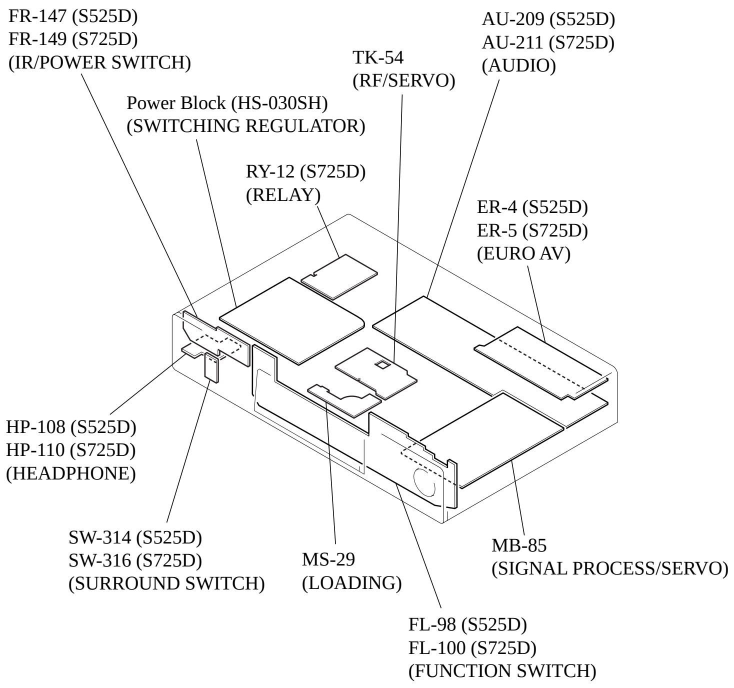
4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

TK-54 (RF/SERVO) PRINTED WIRING BOARD

– Ref. No.: TK-54 board; 2,000 series –

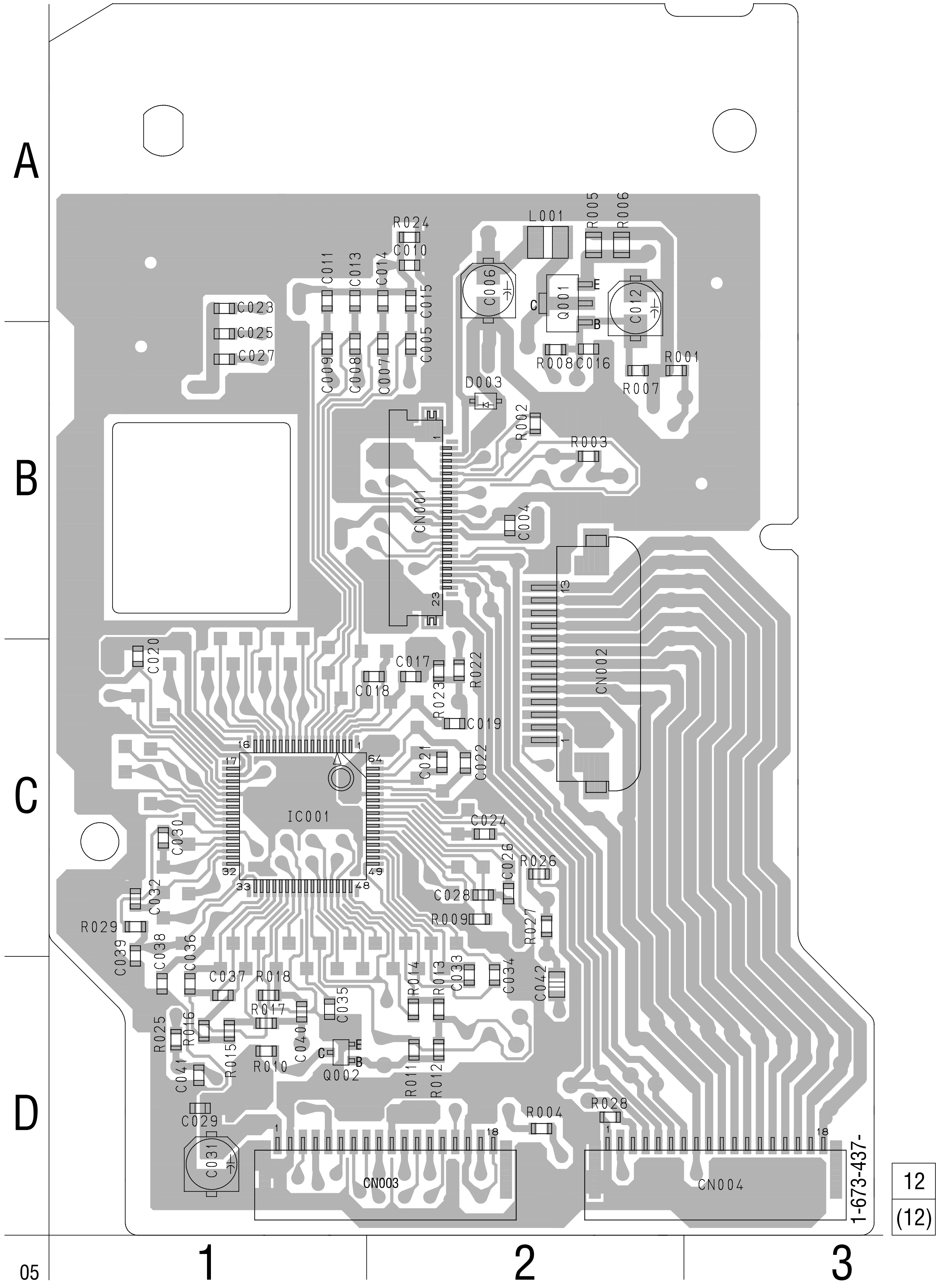
TK-54 BOARD (SIDE A)

CN001	B-2
CN002	C-2
CN003	D-2
CN004	D-3
D003	B-2
IC001	C-1
Q001	A-2
Q002	D-1

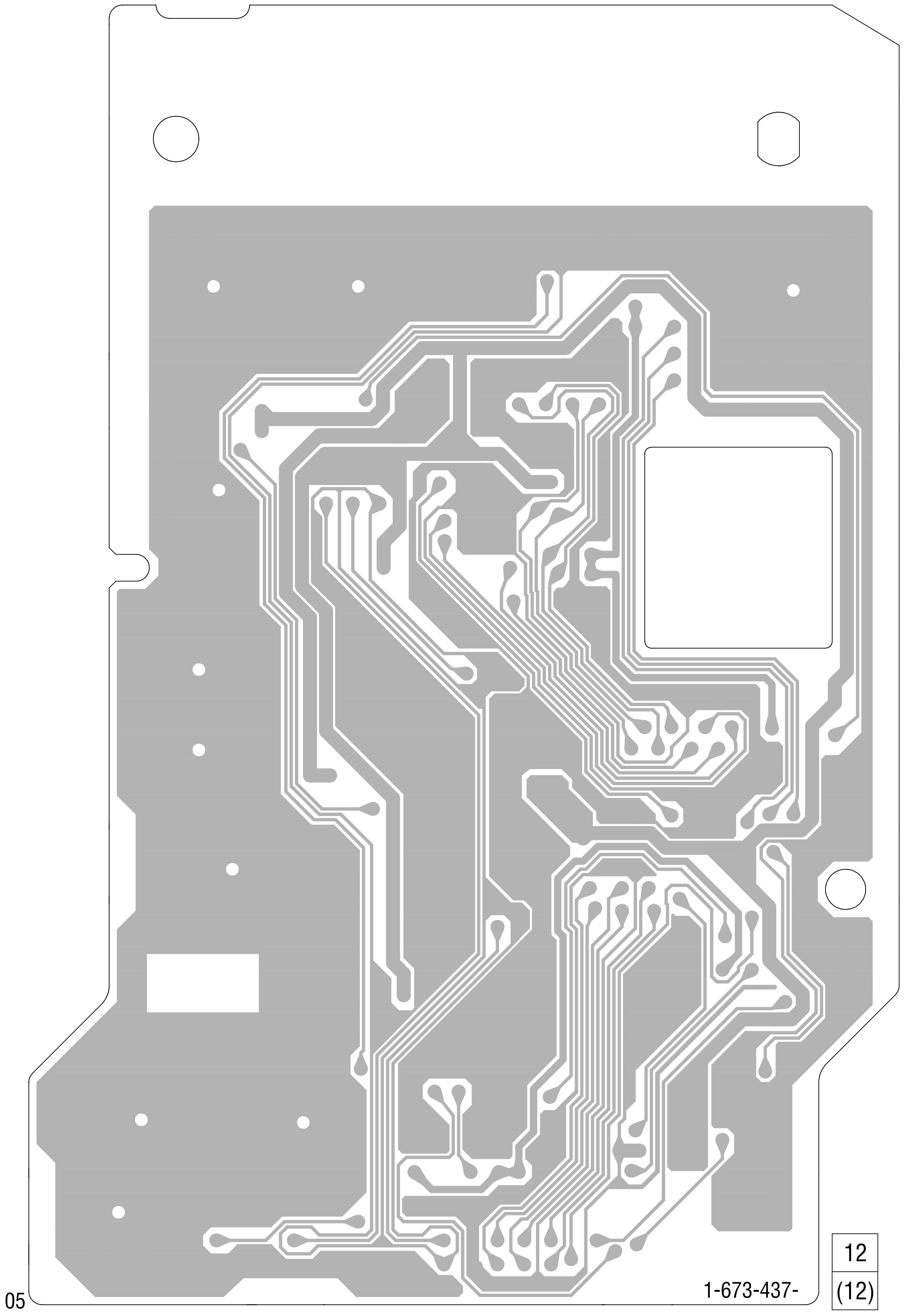


There are few cases that the part isn't mounted in this model is printed on this diagram.

TK-54 BOARD(SIDE A)

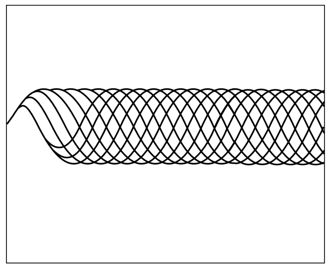


TK-54 BOARD(SIDE B)



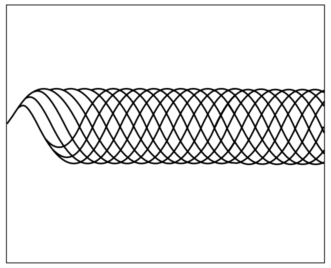
• **Waveforms**

❶ IC001 ① (DVD play)
200 mV/DIV 100 ns/DIV



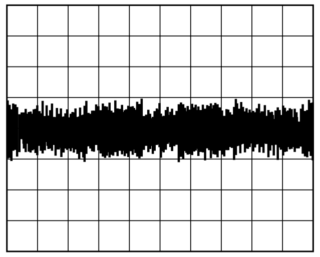
536 mVp-p

❷ IC001 ① (CD play)
500 mV/DIV 500 ns/DIV



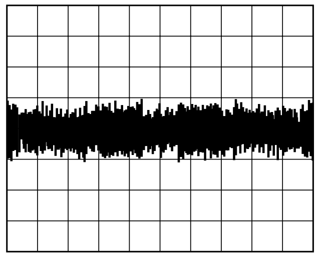
880 mVp-p

❸ IC001 ㉙ (DVD play)
200 mV/DIV 500 ms/DIV



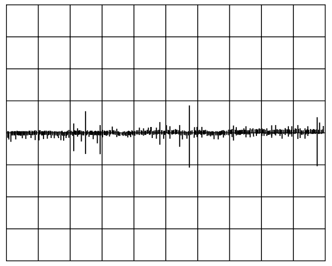
592 mVp-p

❹ IC001 ㉙ (CD play)
200 mV/DIV 20 ms/DIV



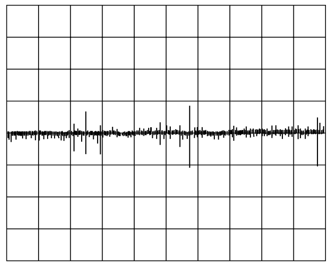
448 mVp-p

❺ IC001 ㊴ (DVD play)
500 mV/DIV 50 ms/DIV



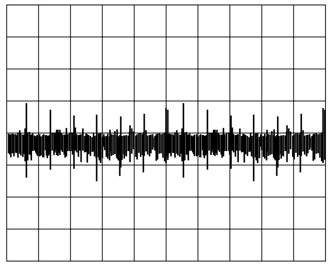
1.3 Vp-p

❻ IC001 ㊴ (CD play)
500 mV/DIV 200 ms/DIV



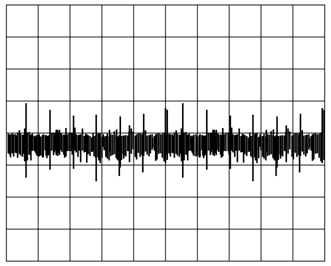
1.7 Vp-p

❼ IC001 ㊵ (DVD play)
100 mV/DIV 50 ms/DIV



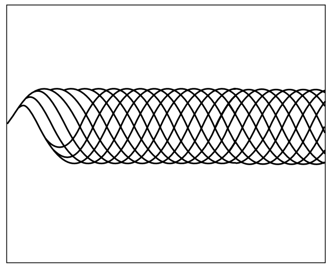
180 mVp-p

❽ IC001 ㊵ (CD play)
500 mV/DIV 50 ms/DIV



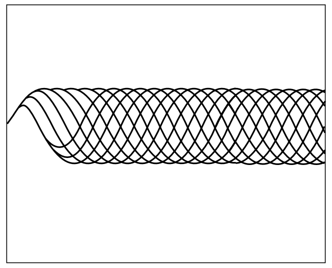
860 mVp-p

❾ IC001 (54) (DVD play)
500 mV/DIV 100 ns/DIV



1.5 Vp-p

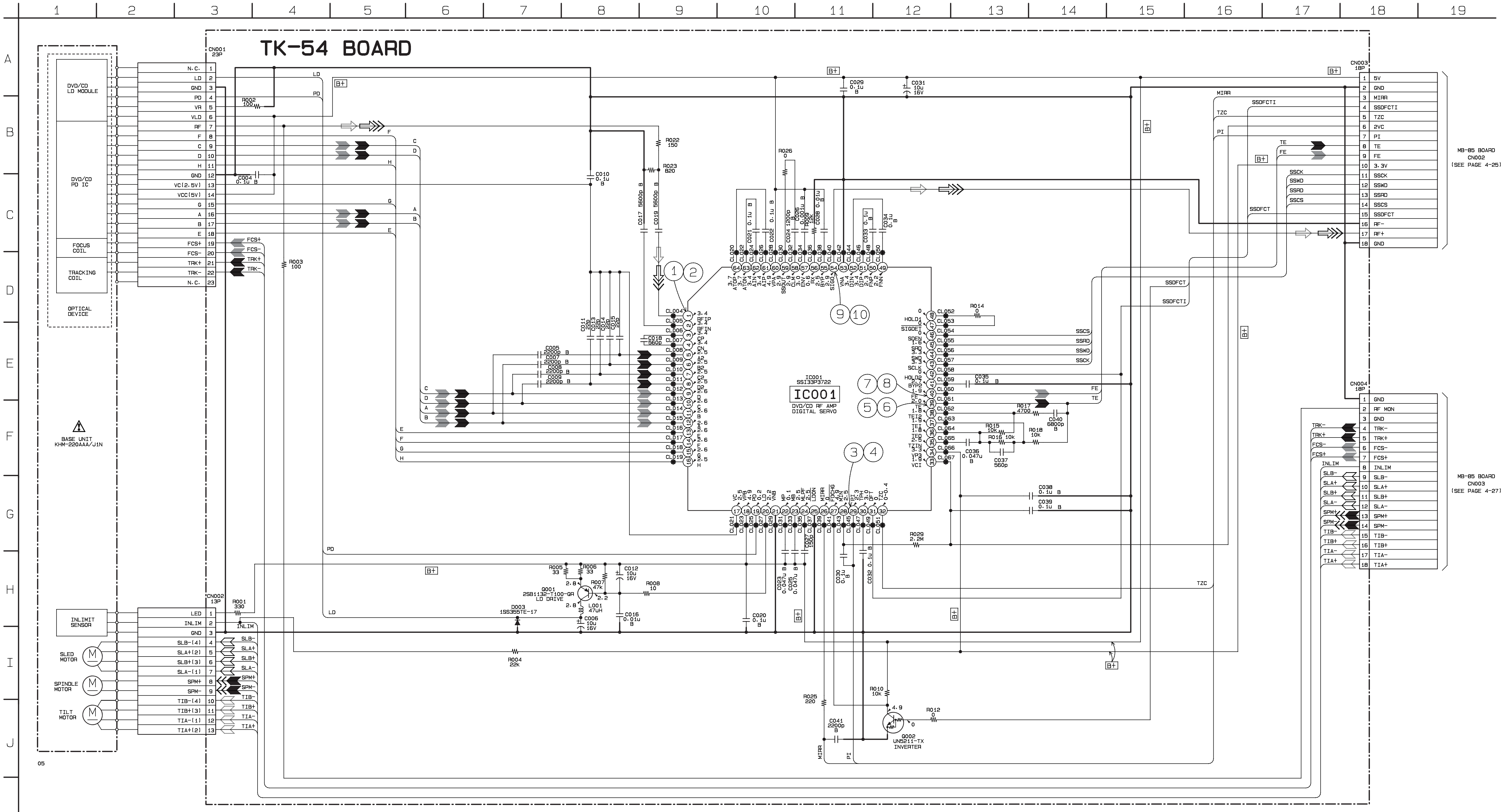
❿ IC001 (54) (CD play)
500 mV/DIV 500 ns/DIV



1.5 Vp-p

TK-54 (RF/SERVO) SCHEMATIC DIAGRAM • See page 4-9 for printed wiring board and page 4-12 for waveforms.

– Ref. No.: TK-54 board; 2,000 series –



NO MARK:DVD/CD PLAY

• SIGNAL PATH

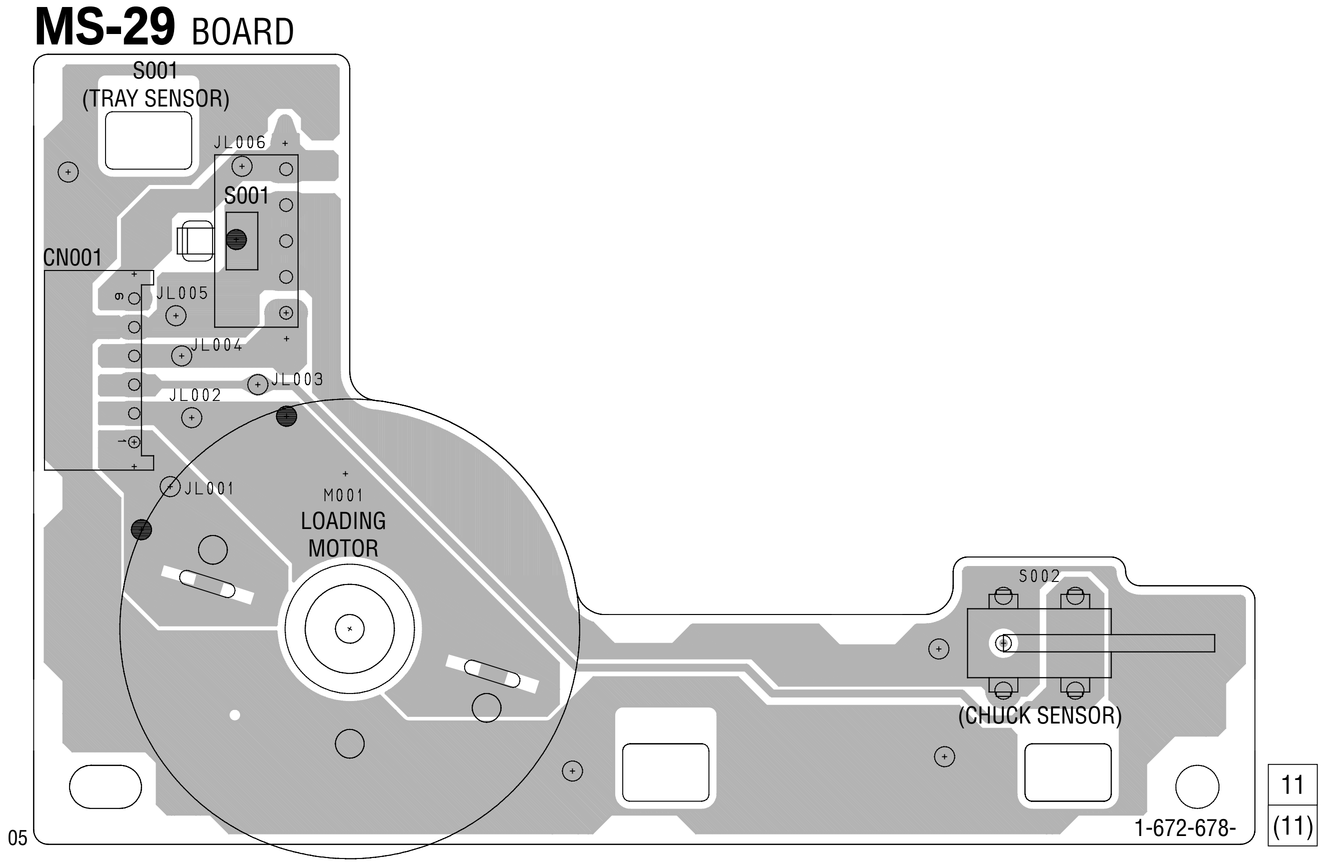
SPINDLE SERVO(SPEED AND PHASE)	
TRACKING SERVO DVD/CD CDV	
SLED SERVO DVD/CD	
FOCUS SERVO	
SKEW SERVO DVD/CD	

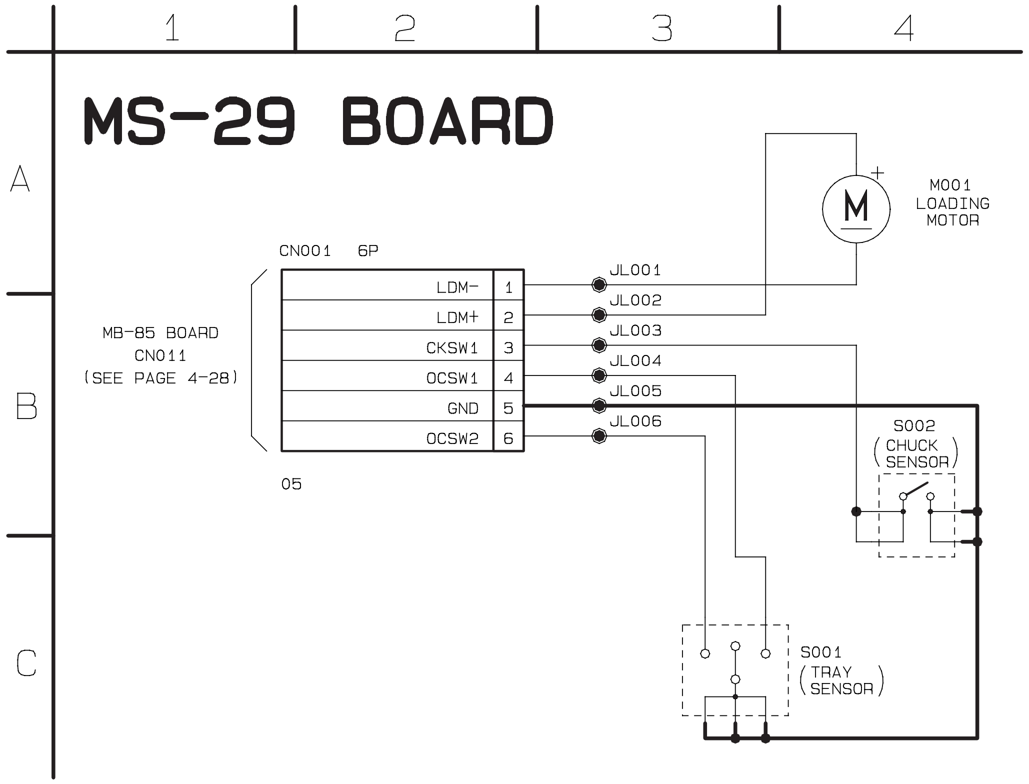
	VIDEO SIGNAL	AUDIO SIGNAL
	Y/CHROMA	
PB		

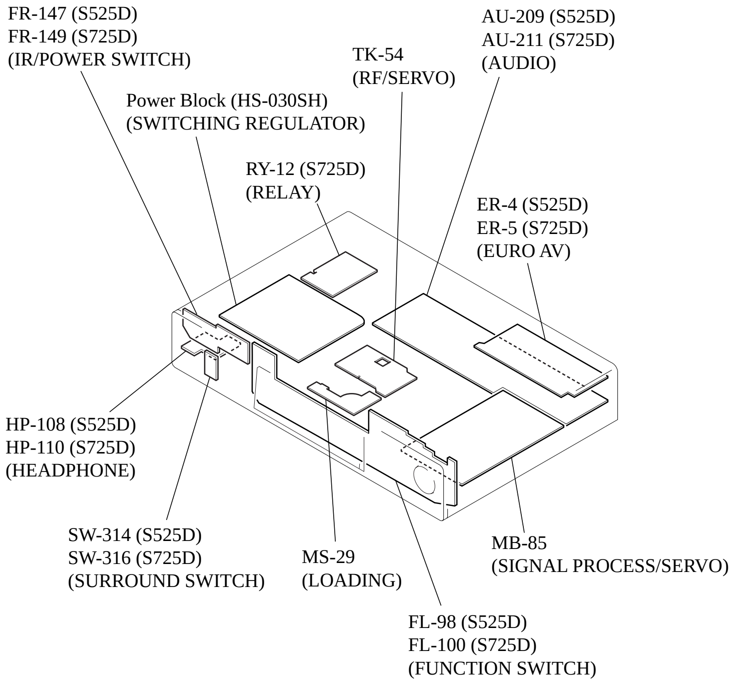
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MS-29 (LOADING) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM
– Ref. No.: MS-29 board; 3,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.







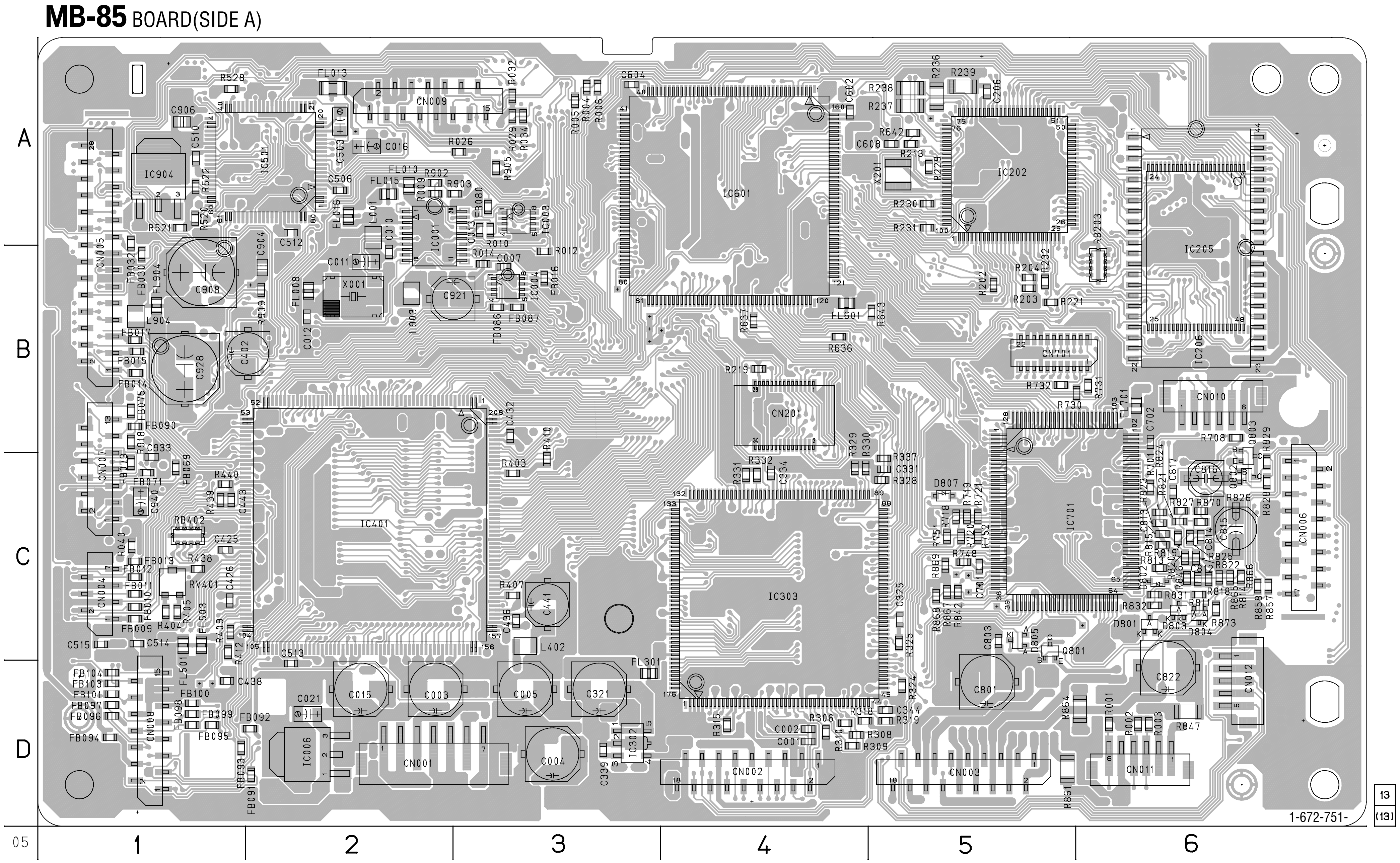
MB-85 (SIGNAL PROCESS/SERVO) PRINTED WIRING BOARD

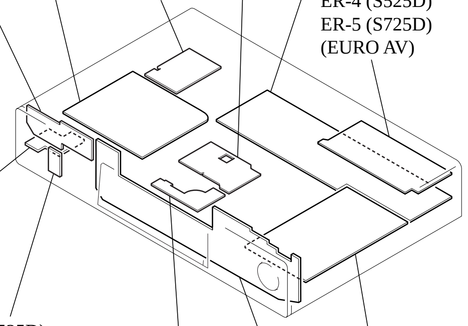
– Ref. No.: MB-85 board; 1,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

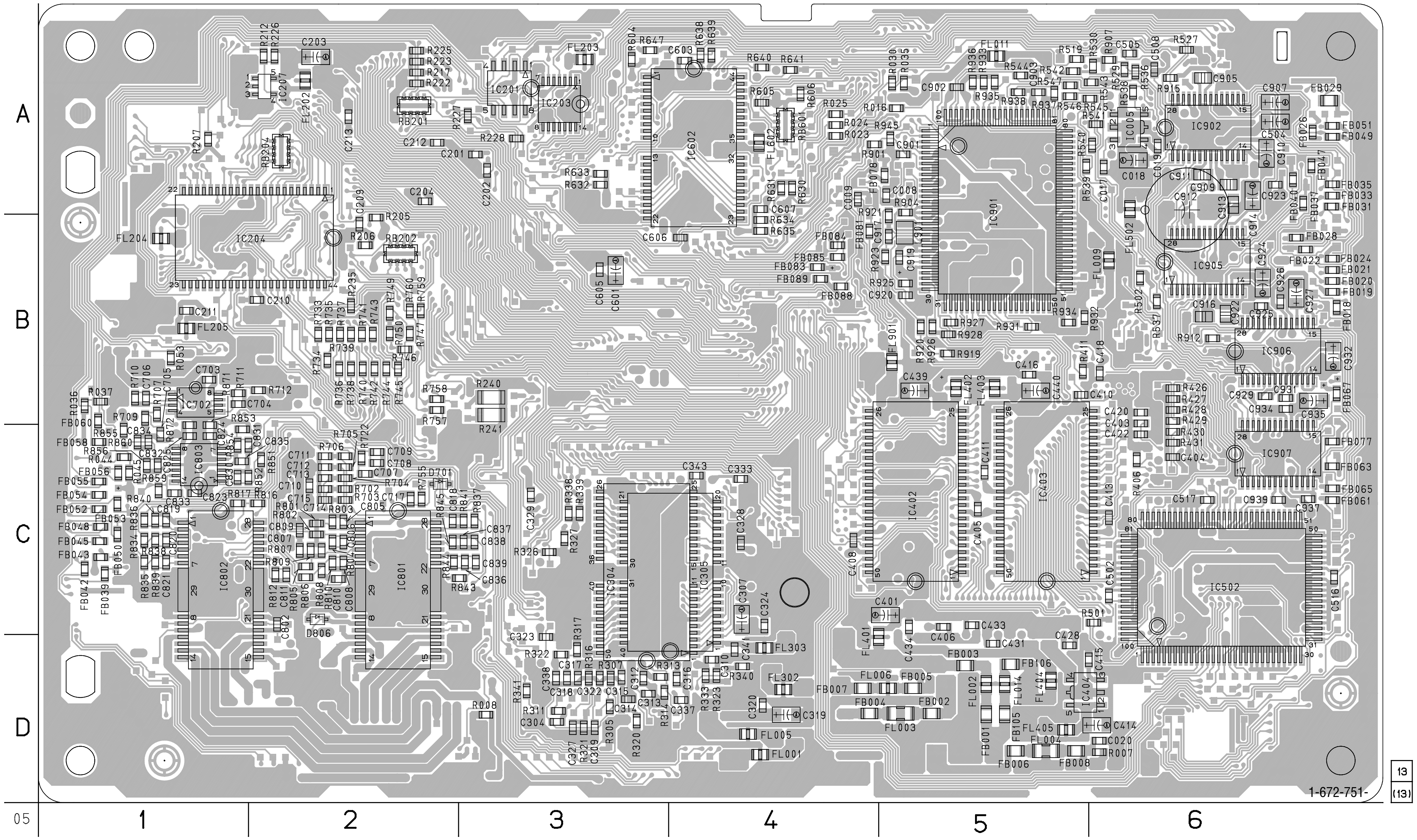
MB-85 BOARD (SIDE A)

CN001	D-2
CN002	D-4
CN003	D-5
CN004	C-1
CN005	B-1
CN006	C-7
CN007	C-1
CN010	B-6
CN011	D-6
CN012	D-6
D801	C-6
D802	C-6
D803	C-6
D804	C-6
D805	C-5
D807	C-5
IC001	A-2
IC003	A-3
IC004	B-3
IC202	A-5
IC206	A-6
IC302	D-3
IC303	C-4
IC401	C-2
IC501	A-2
IC601	A-4
IC701	C-5
IC904	A-1
Q801	C-5
Q802	C-6
Q803	C-6





MB-85 BOARD(SIDE B)

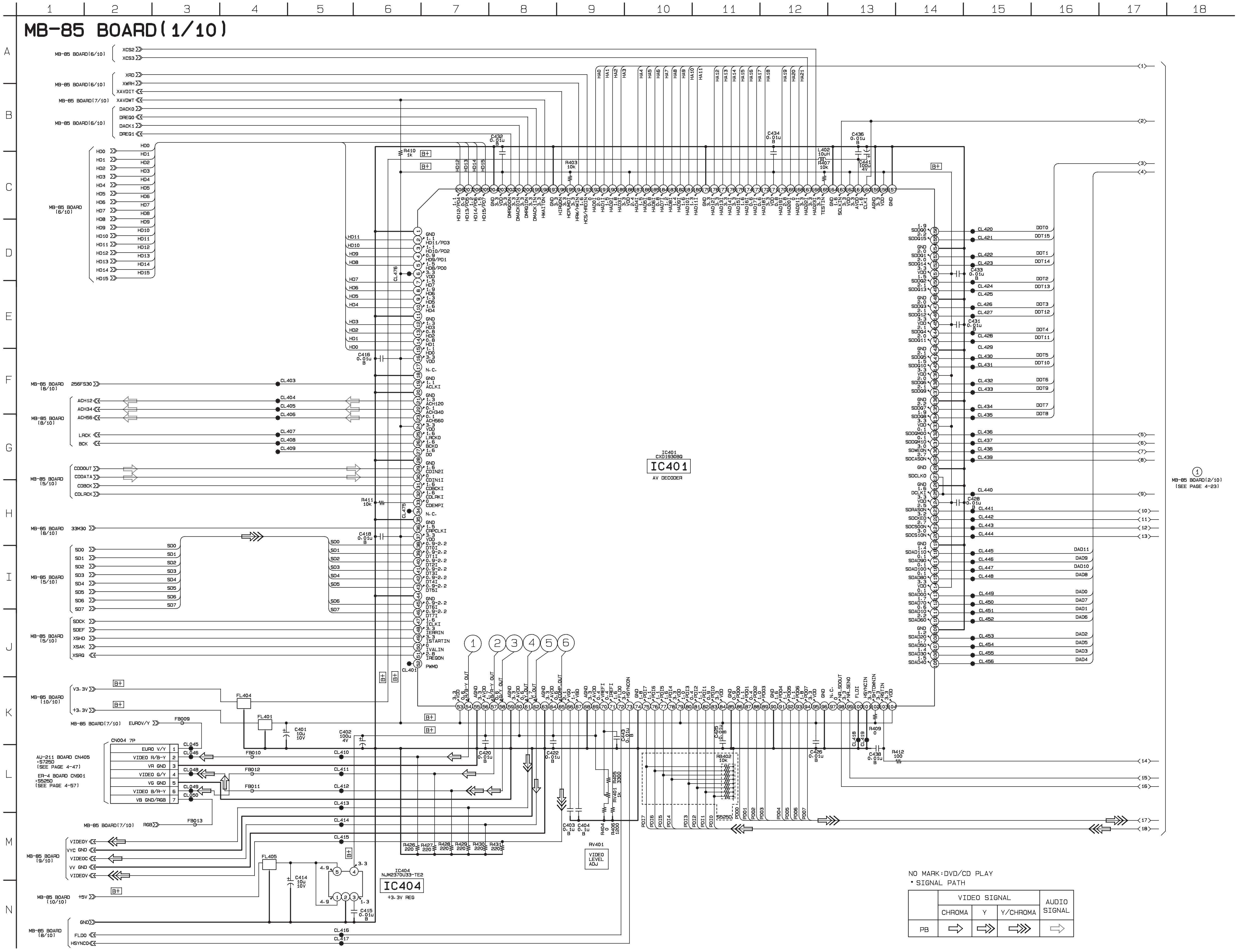


MB-85 BOARD (SIDE B)

D701	C-2
D806	C-2
IC005	A-6
IC201	A-3
IC203	A-3
IC204	B-2
IC207	A-2
IC304	C-3
IC402	C-5
IC403	C-5
IC404	D-5
IC502	C-6
IC602	A-4
IC702	B-1
IC801	C-2
IC802	C-1
IC803	C-1
IC902	A-6
IC905	B-6
IC906	B-6
IC907	C-6

MB-85 (AV DECODER) SCHEMATIC DIAGRAM • See page 4-17 for printed wiring board.

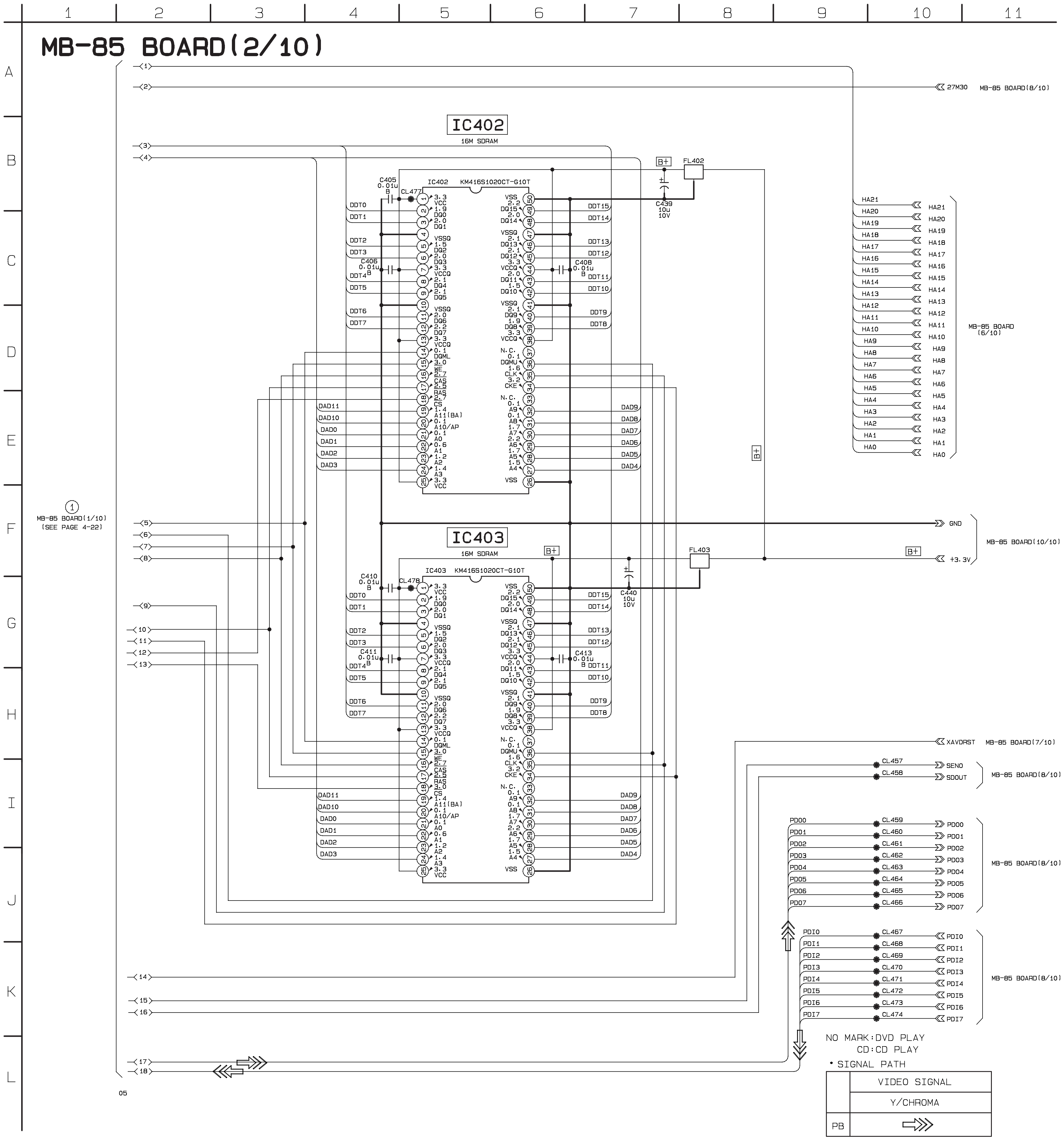
– Ref. No.: MB-85 board; 1,000 series –



AV DECODER
MB-85 (1/10)

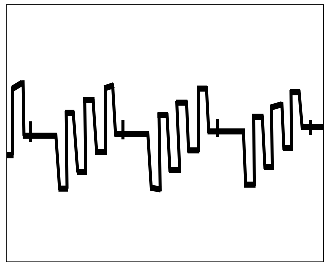
MB-85 (SDRAM) SCHEMATIC DIAGRAM • See page 4-17 for printed wiring board.

– Ref. No.: MB-85 board; 1,000 series –



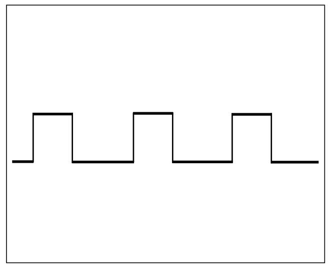
• Waveforms

❶ IC401 (54)



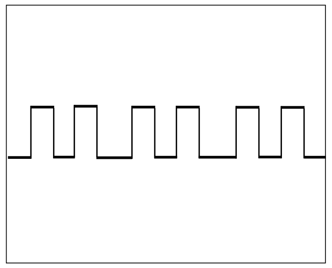
720 mVp-p (H)

❸ IC401 (58) (RGB output)



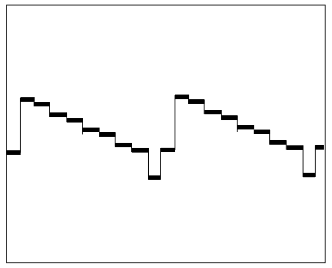
1.0 Vp-p (H)

❶ IC401 (54) (RGB output)



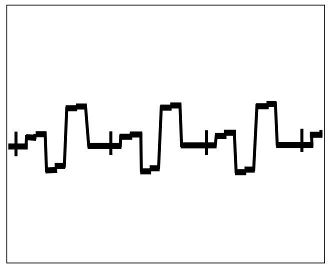
720 mVp-p (H)

❹ IC401 (61)



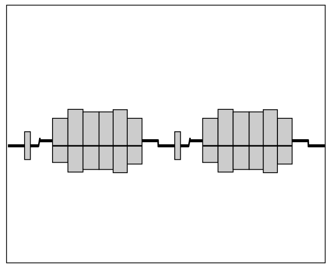
1.1 Vp-p (H)

❷ IC401 (57)



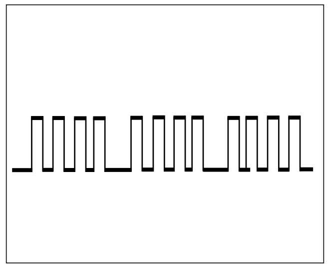
728 mVp-p (H)

❺ IC401 (62)



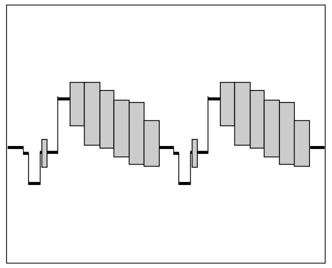
816 mVp-p (H)

❷ IC401 (57) (RGB output)



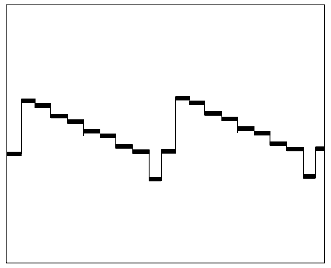
728 mVp-p (H)

❻ IC401 (65)



1.2 Vp-p (H)

❸ IC401 (58)



1.0 Vp-p (H)

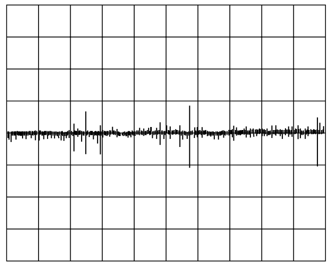
SDRAM
MB-85 (2/10)

MB-85 (SERVO DSP) SCHEMATIC DIAGRAM • See page 4-17 for printed wiring board.

– Ref. No.: MB-85 board; 1,000 series –

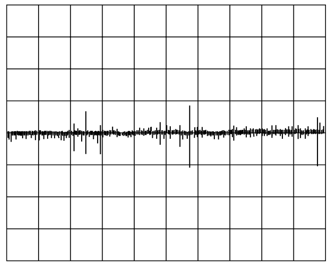
• Waveforms

❶ IC701 ⑲ (DVD play)
500 mV/DIV 50 ms/DIV



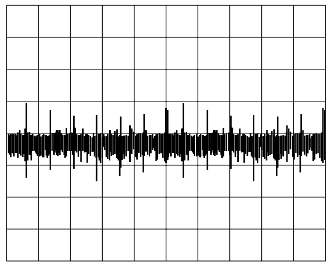
1.4 Vp-p

❷ IC701 ⑲ (CD play)
500 mV/DIV 200 mV/DIV



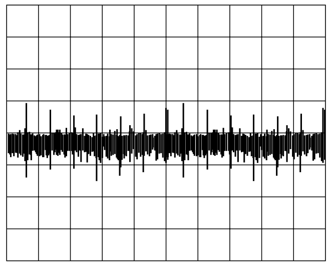
1.7 Vp-p

❸ IC701 ⑱ (DVD play)
100 mV/DIV 5 ms/DIV

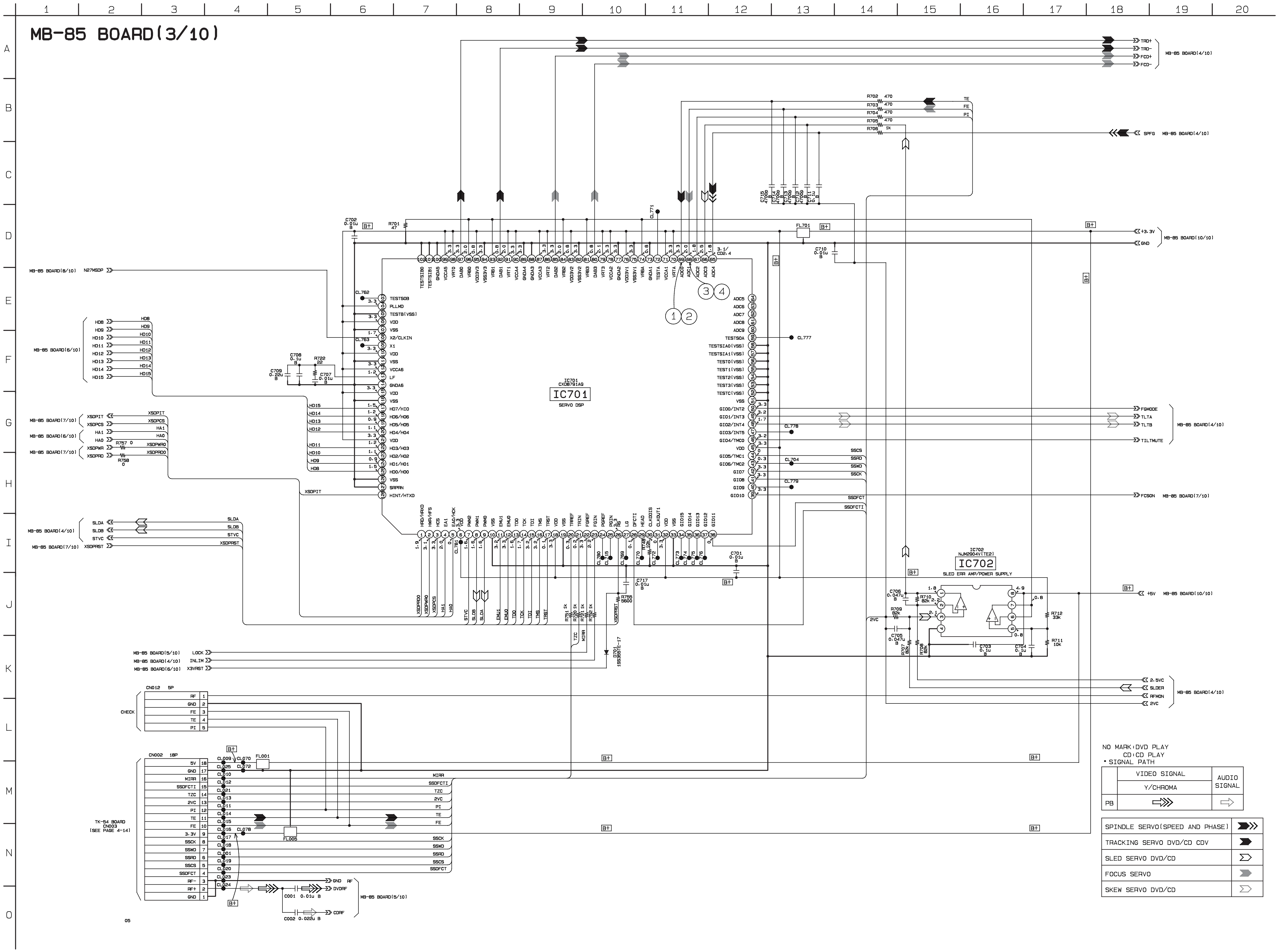


180 mVp-p

❹ IC701 ⑱ (CD play)
500 mV/DIV 50 ms/DIV



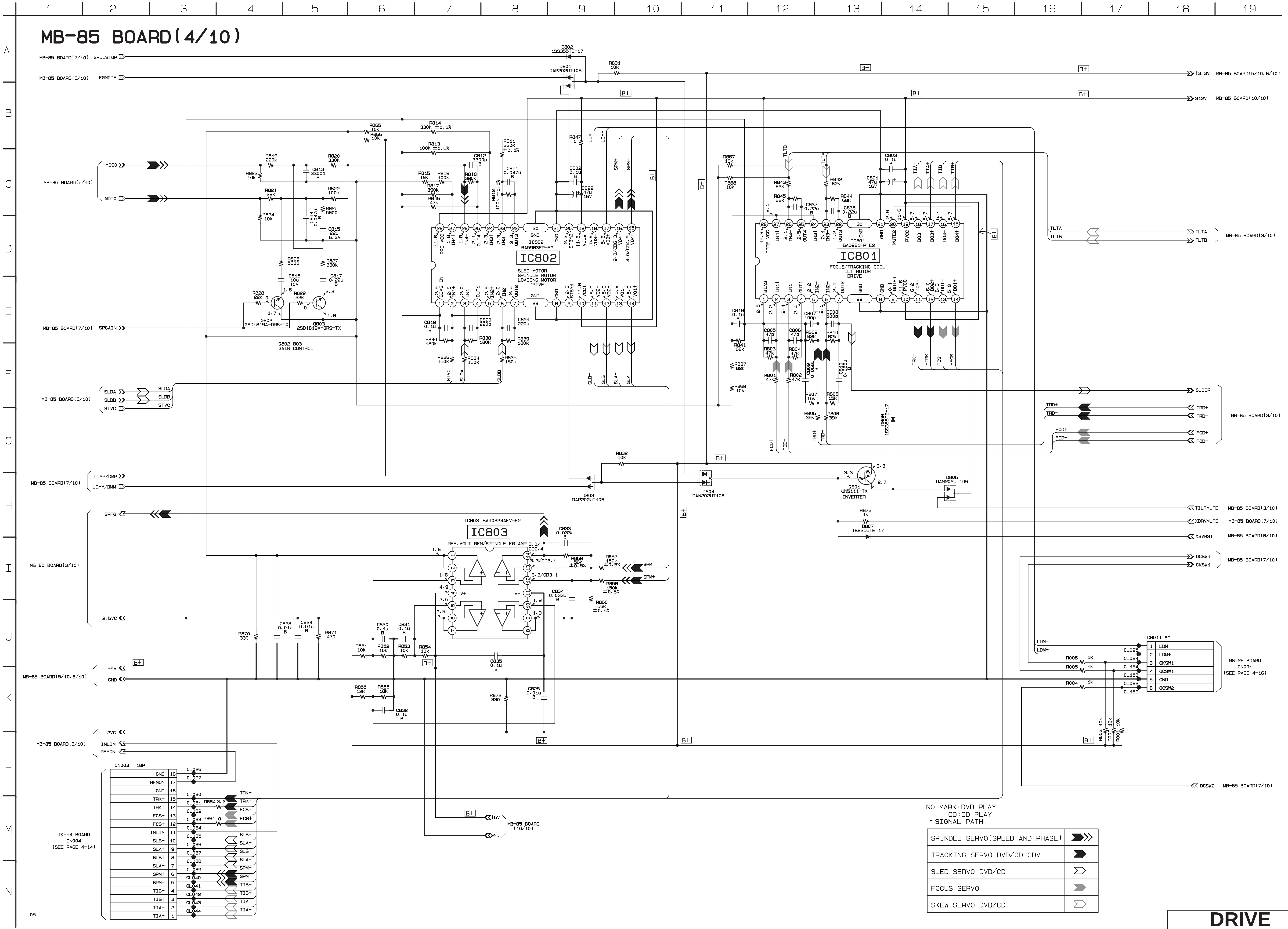
860 mVp-p



SERVO DSP
MB-85 (3/10)

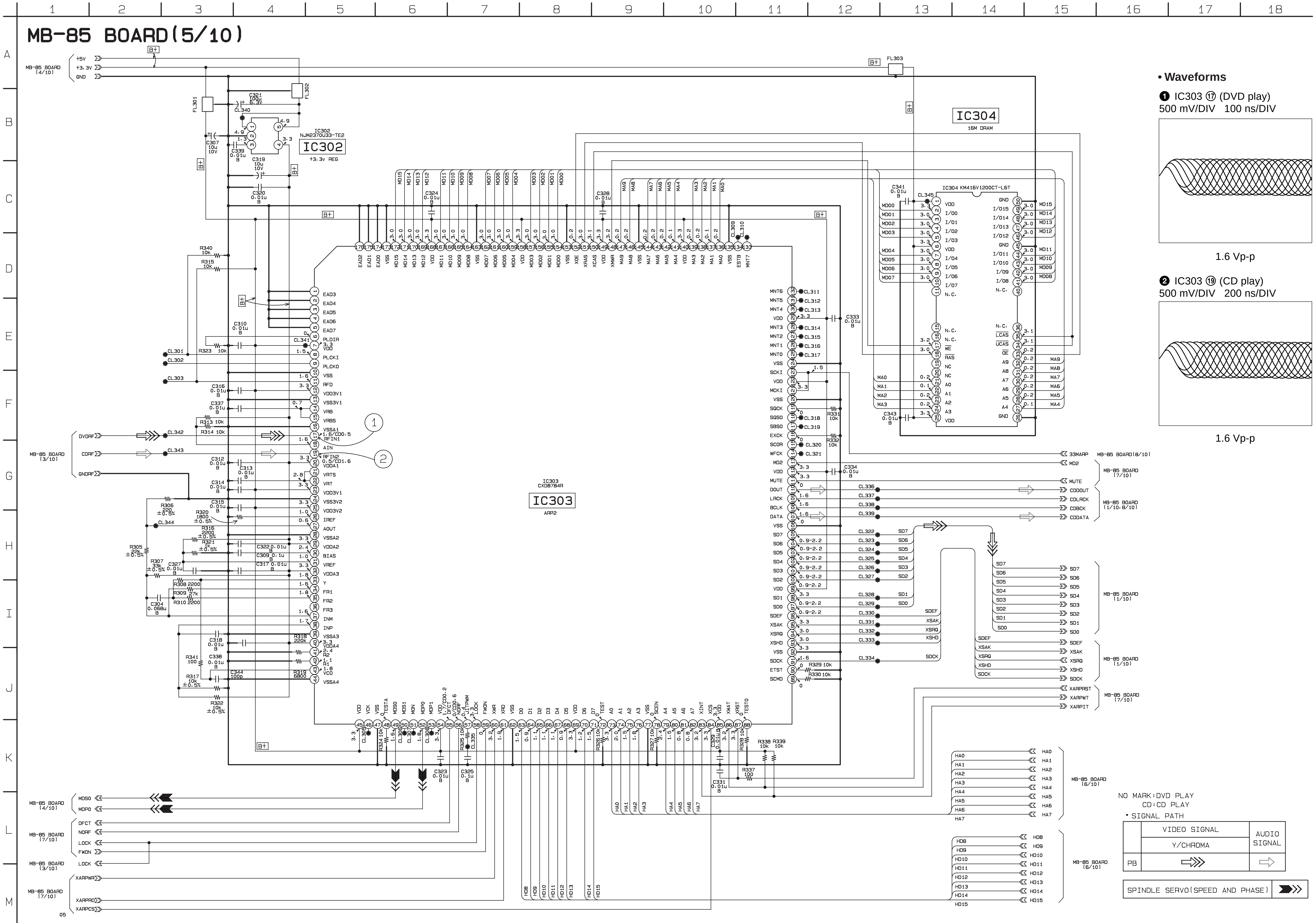
MB-85 (DRIVE) SCHEMATIC DIAGRAM **• See page 4-17 for printed wiring board.**

– Ref. No.: MB-85 board; 1,000 series –



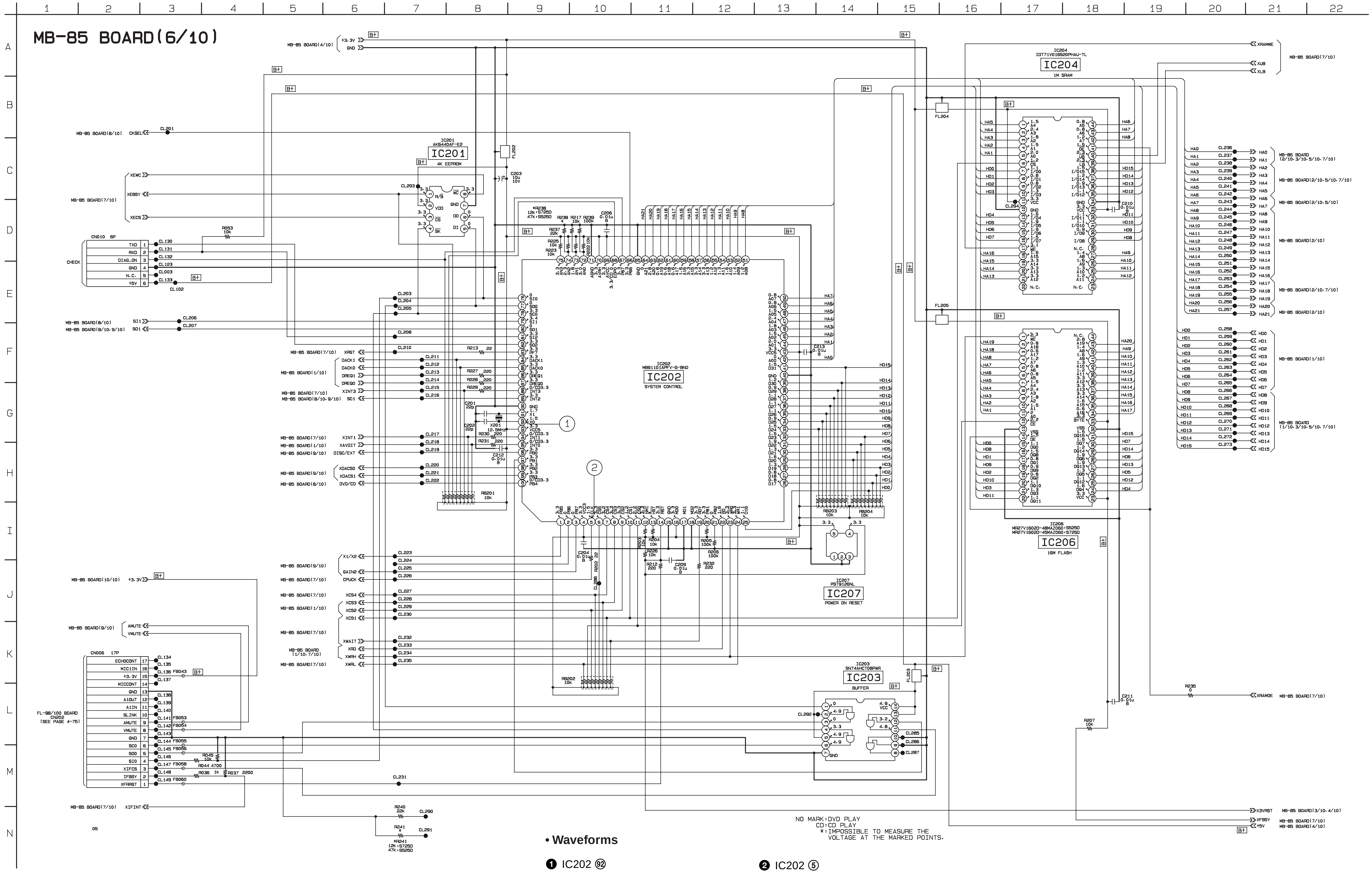
MB-85 (ARP) SCHEMATIC DIAGRAM • **See page 4-17 for printed wiring board.**

– Ref. No.: MB-85 board; 1,000 series –



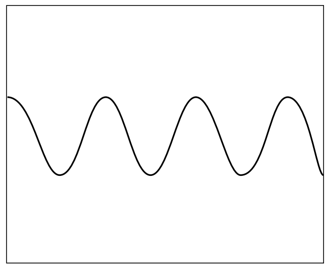
MB-85 (SYSTEM CONTROL) SCHEMATIC DIAGRAM • See page 4-17 for printed wiring board.

– Ref. No.: MB-85 board; 1,000 series –



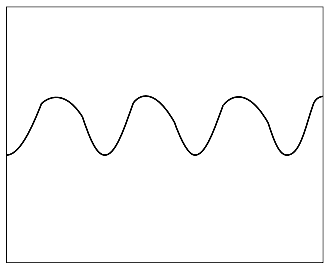
• Waveforms

❶ IC202 ㊾



2.4 Vp-p (12.5 MHz)

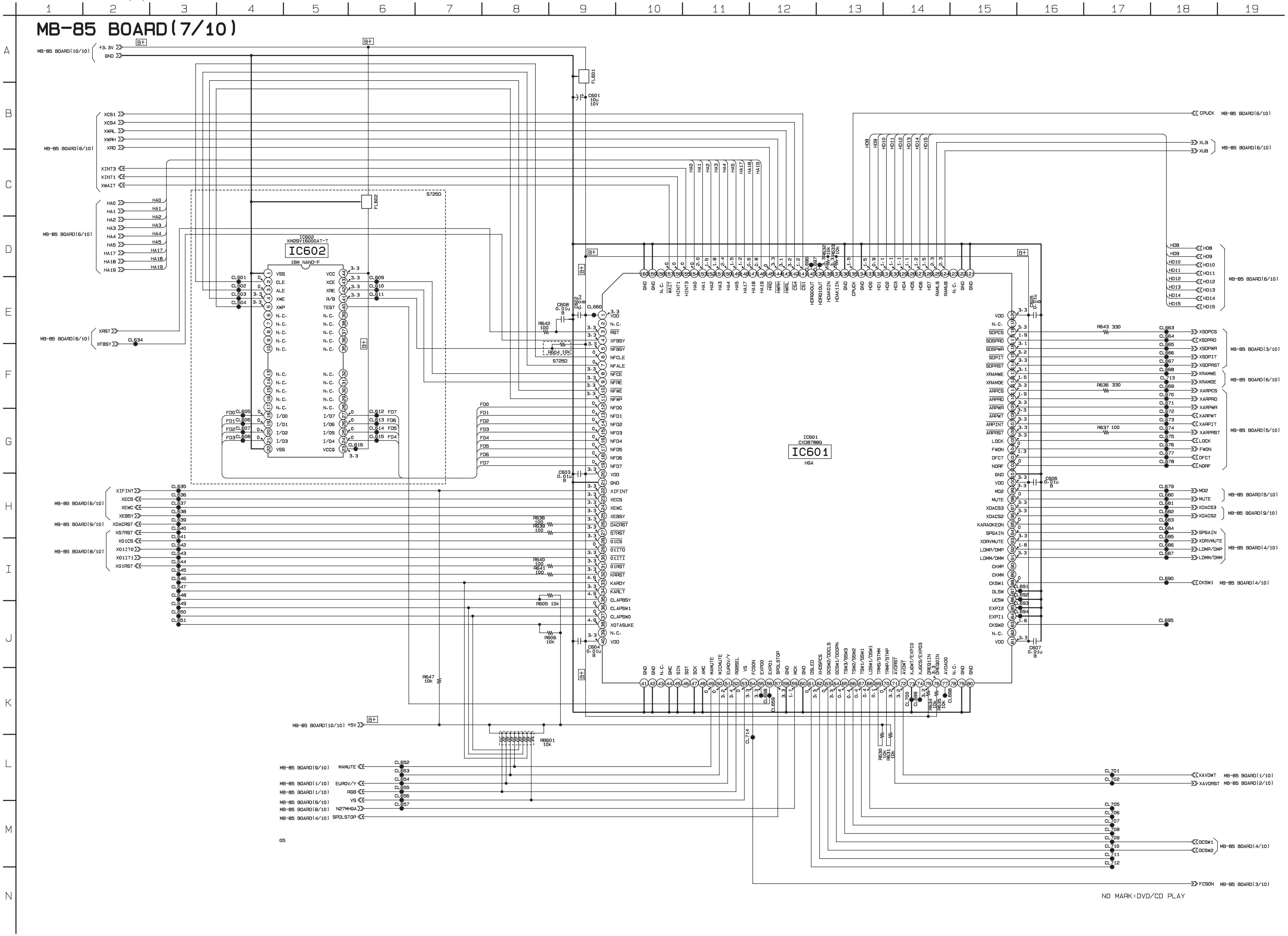
❷ IC202 ⑤



4 Vp-p (25.3 MHz)

MB-85 (HGA) SCHEMATIC DIAGRAM • See page 4-17 for printed wiring board.

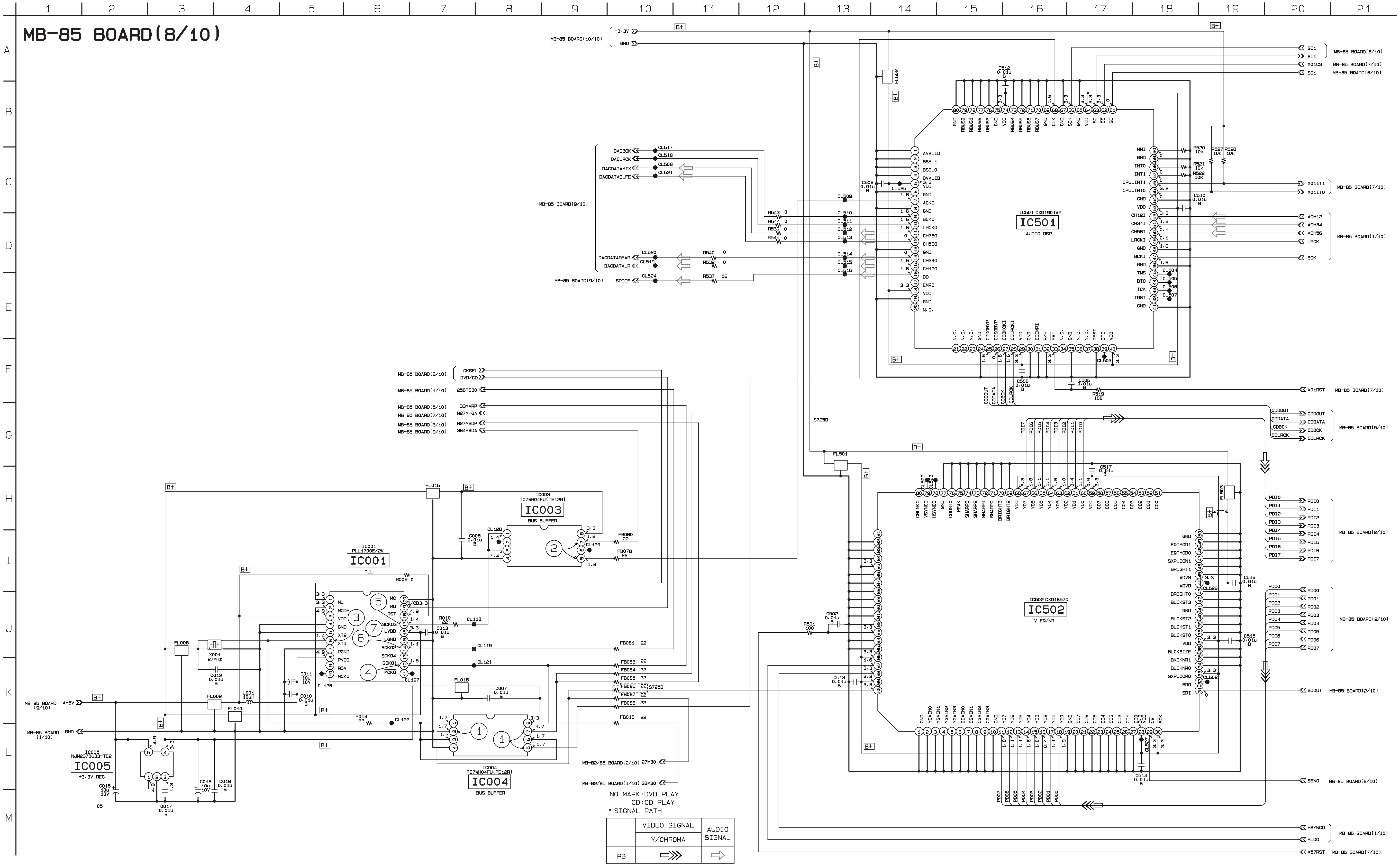
– Ref. No.: MB-85 board; 1,000 series –



HGA
MB-85 (7/10)

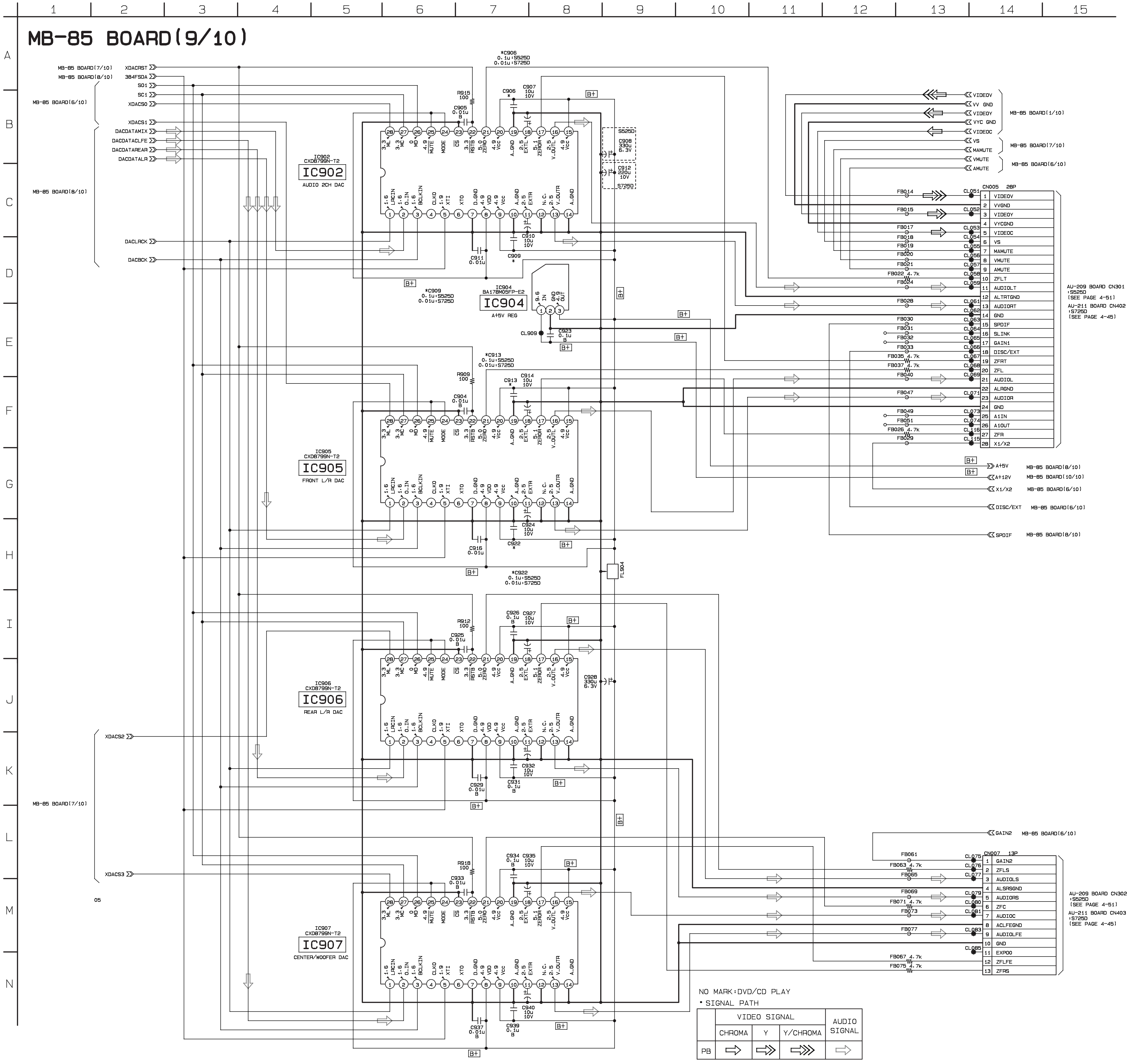
MB-85 (CLOCK GENERATOR, AUDIO DSP, V EQ/NR) SCHEMATIC DIAGRAM **• See page 4-17 for printed wiring board and page 4-40 for waveforms.**

– Ref. No.: MB-85 board; 1,000 series –

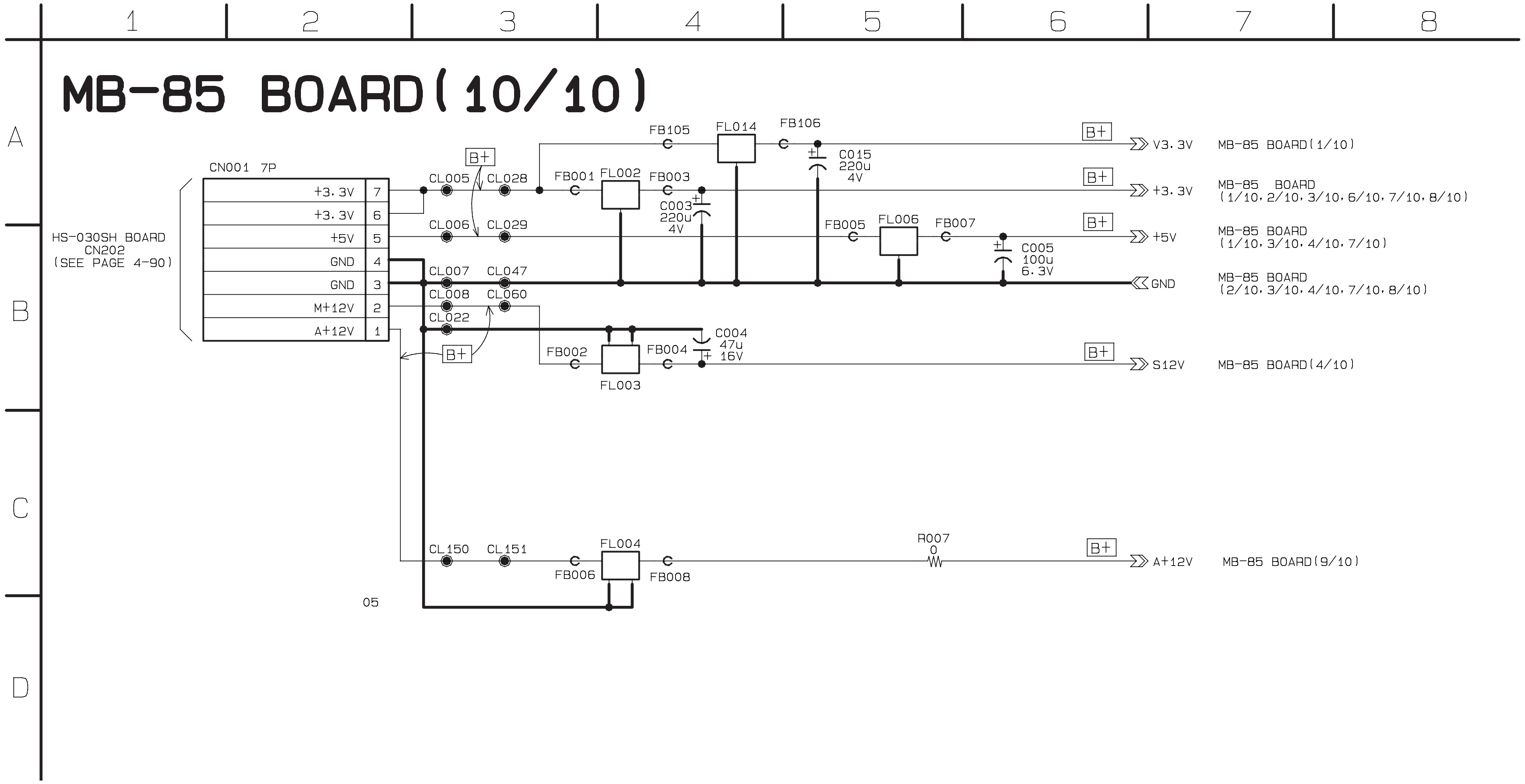


CLOCK GENERATOR, AUDIO DSP, V EQ/NR
MB-85 (8/10)

MB-85 (DAC) SCHEMATIC DIAGRAM • See page 4-17 for printed wiring board.
– Ref. No.: MB-85 board; 1,000 series –

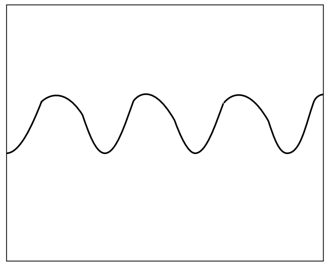


MB-85 (BIAS) SCHEMATIC DIAGRAM • **See page 4-17 for printed wiring board.**
– Ref. No.: MB-85 board; 1,000 series –



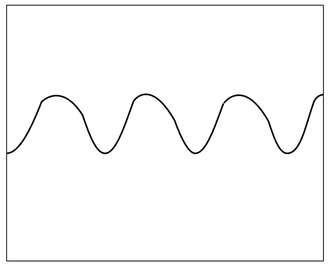
• **Waveforms**

❶ IC004 ②, ⑤, ⑦



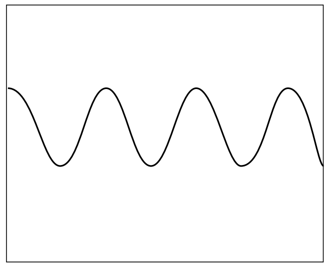
4.2 Vp-p (26.9 MHz)

❷ IC003 ⑤, ⑦



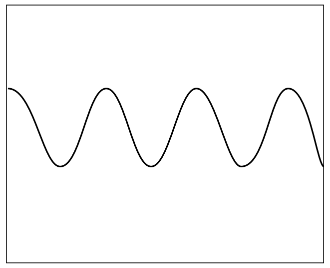
DVD: 6.2 Vp-p (37.0 MHz)
CD : 5 Vp-p (33.6 MHz)

❸ IC001 ⑥



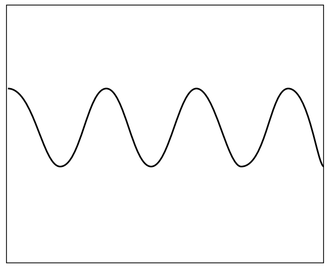
4.2 Vp-p (27.0 MHz)

❹ IC001 ⑫



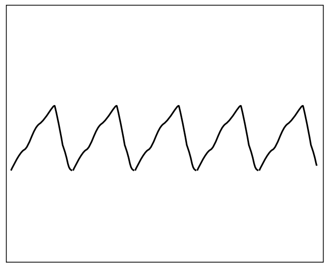
4.6 Vp-p (33.8 MHz)

❺ IC001 ⑰



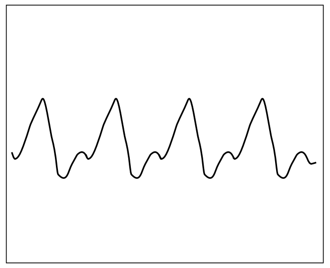
DVD: 5.8 Vp-p (36.5 MHz)
CD : 5.1 Vp-p (33.8 MHz)

❻ IC001 ⑭ (DVD play)



4.2 Vp-p (25.3 MHz)

❼ IC001 ⑭ (CD play)



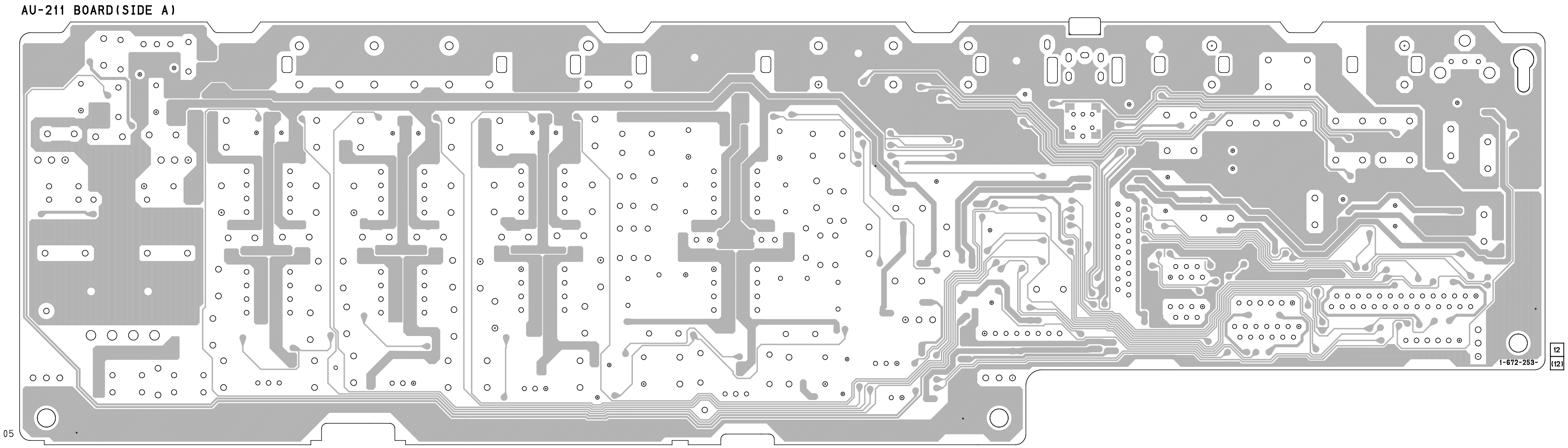
4.7 Vp-p (22.5 MHz)

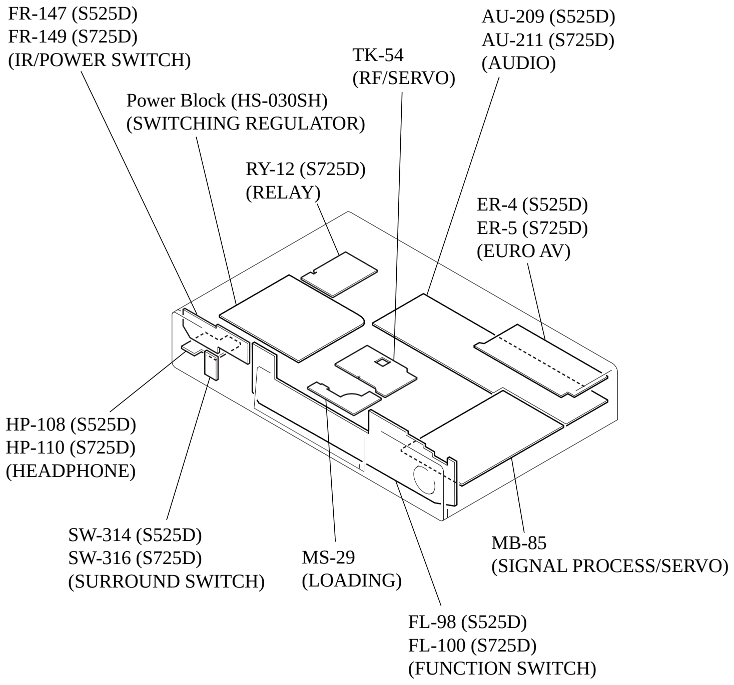
AU-211 (AUDIO, VIDEO BUFFER) PRINTED WIRING BOARD

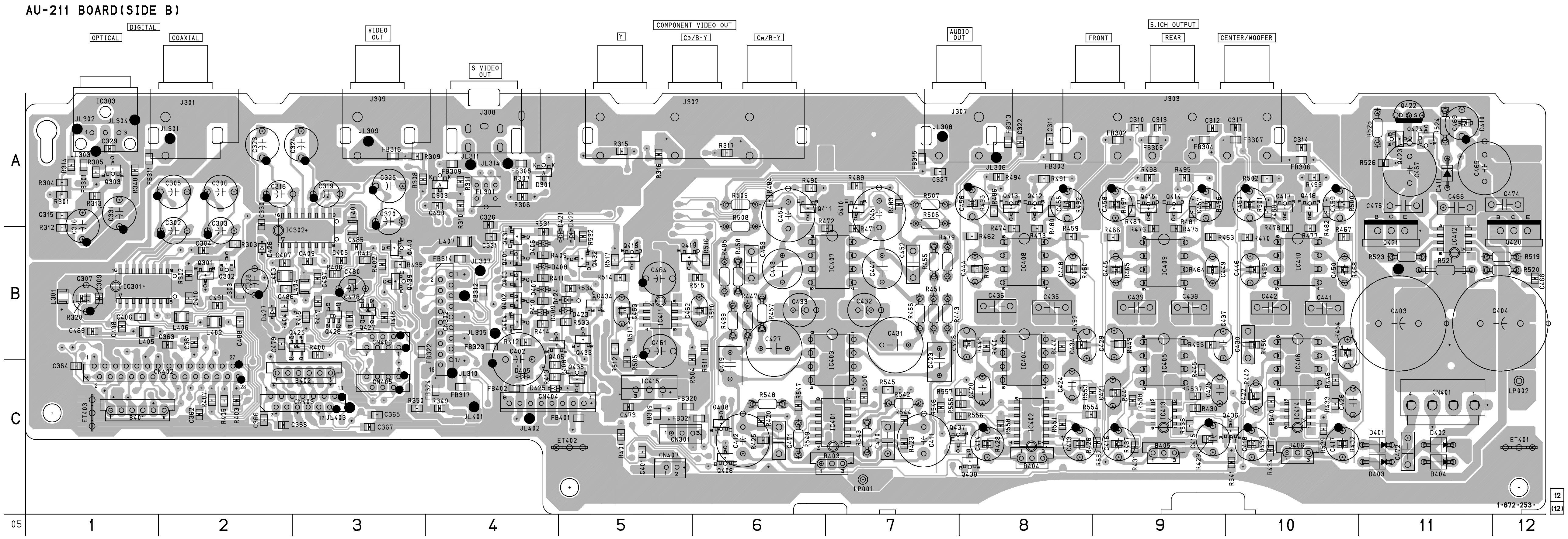
– Ref. No.: AU-211 board; 3,000 series –

– DVP-S725D –

There are few cases that the part isn't mounted in this model is printed on this diagram.







AU-211 BOARD (SIDE B)

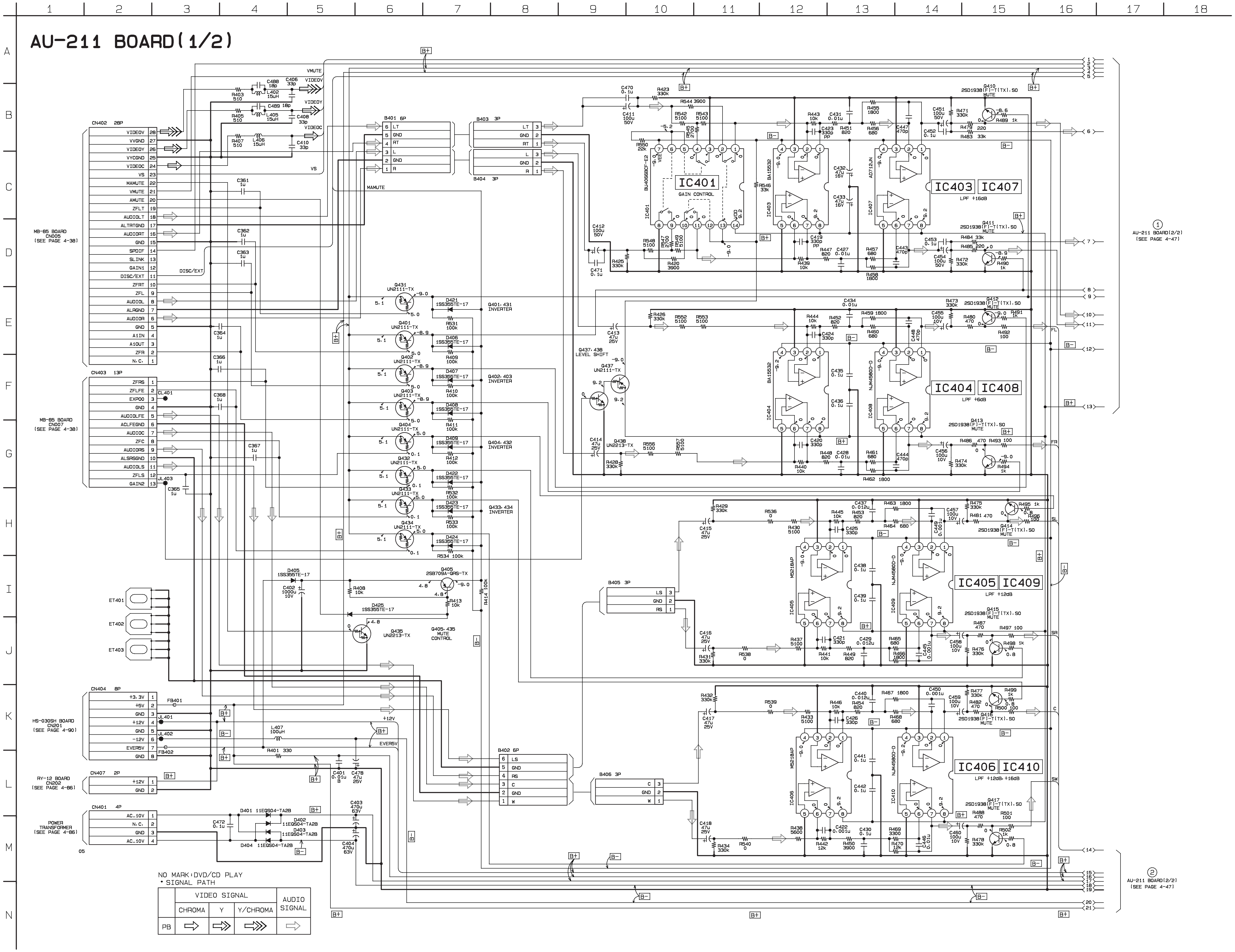
CN301	C-5
CN302	B-4
CN401	C-11
CN402	C-2
CN403	C-3
CN404	C-4
CN405	C-3
CN406	B-3
CN407	C-5
D301	A-4
D303	A-4
D401	C-11
D402	C-11
D403	C-11
D404	C-11
D405	C-4
D406	B-4
D407	B-4
D408	B-4
D409	B-4
D410	A-11
D411	A-11
D421	B-5
D422	B-5
D423	B-5
D424	B-5
D425	C-4
D426	B-2
D427	B-2
IC301	B-1
IC302	B-3
IC303	A-1
IC401	C-7
IC403	B-7
IC404	C-8
IC405	C-9
IC406	C-10
IC407	B-7
IC408	B-8
IC409	B-9
IC410	B-10
IC411	B-5
IC412	B-11
IC415	C-5
Q301	B-2
Q302	B-2
Q303	A-1
Q401	B-4
Q402	B-4
Q403	B-4
Q404	B-4
Q405	B-4
Q410	A-7
Q411	A-6
Q412	A-8
Q413	A-8
Q414	A-9
Q415	A-9
Q416	A-10
Q417	A-10
Q418	B-5
Q419	B-5
Q420	B-12
Q421	B-11
Q422	A-11
Q423	A-11
Q424	A-11
Q425	B-3
Q426	B-3
Q427	B-3
Q431	B-4
Q432	B-5
Q433	B-5
Q434	B-5
Q435	C-5
Q437	C-7
Q438	C-8
Q439	B-3
Q440	B-3

AUDIO, VIDEO BUFFER
AU-211

AU-211 (AUDIO) SCHEMATIC DIAGRAM • See page 4-41 for printed wiring board.

– Ref. No.: AU-211 board; 3,000 series –

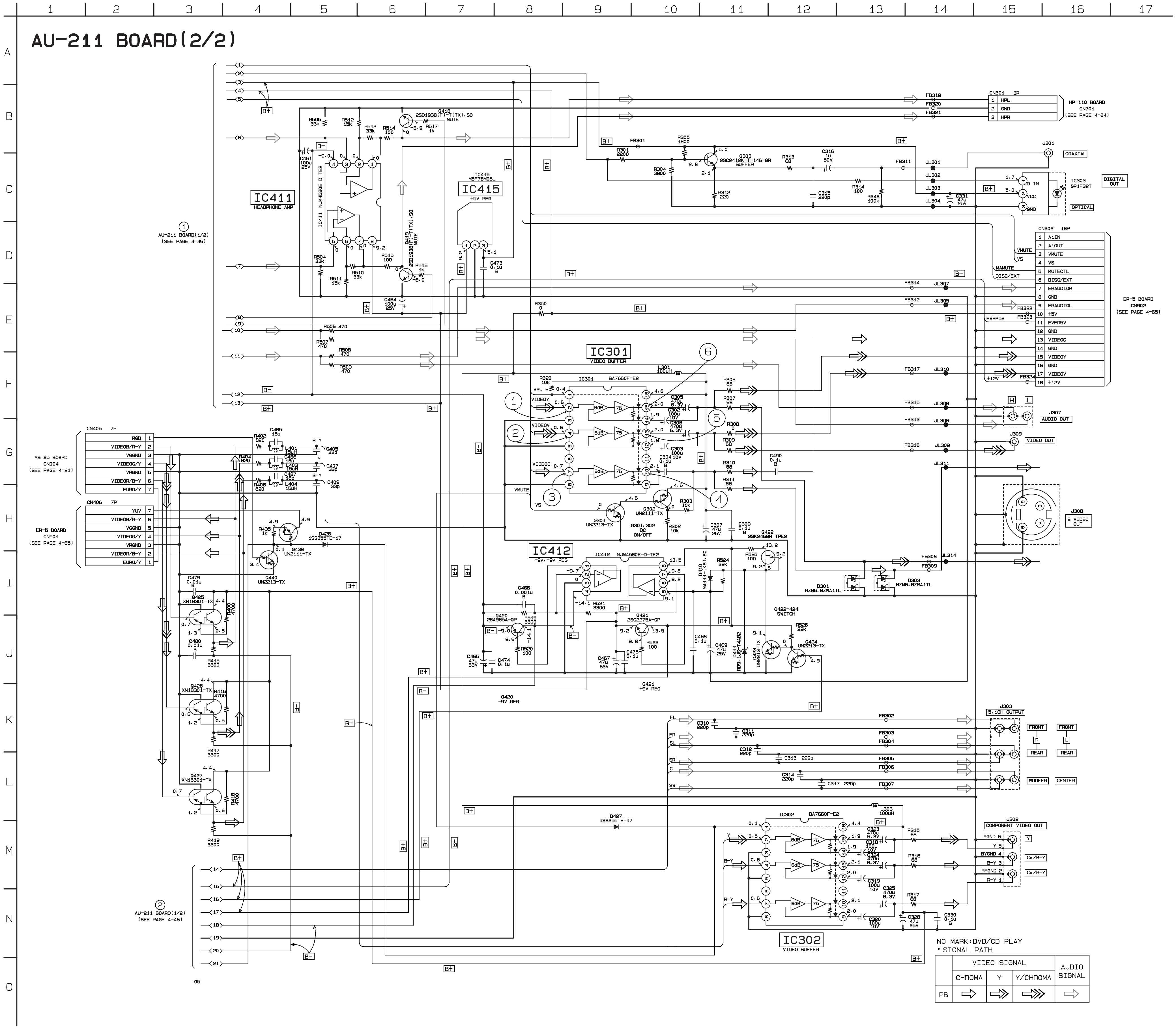
– DVP-S725D –



AU-211 (VIDEO BUFFER) SCHEMATIC DIAGRAM • **See page 4-41 for printed wiring board.**

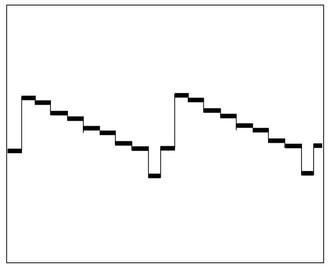
– Ref. No.: AU-211 board; 3,000 series –

– DVP-S725D –



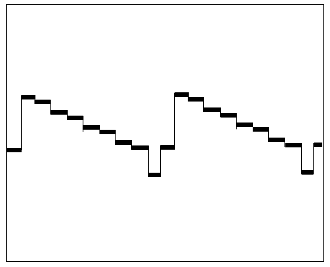
• **Waveforms**

❶ IC301 ②



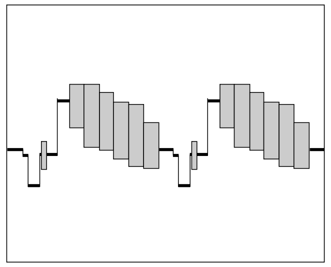
1.1 Vp-p (H)

❻ IC301 ⑮



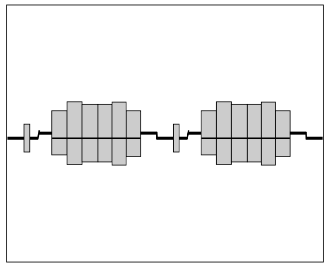
2.0 Vp-p (H)

❷ IC301 ④



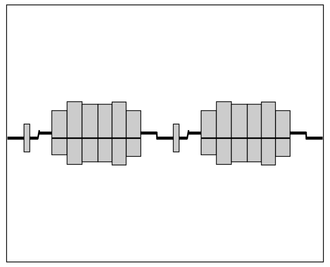
1.2 Vp-p (H)

❸ IC301 ⑦



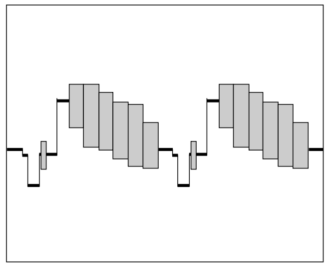
860 mVp-p (H)

❹ IC301 ⑩



1.8 Vp-p (H)

❺ IC301 ⑬



2.4 Vp-p (H)

VIDEO BUFFER
AU-211 (2/2)

AU-209 (AUDIO, VIDEO BUFFER) PRINTED WIRING BOARD

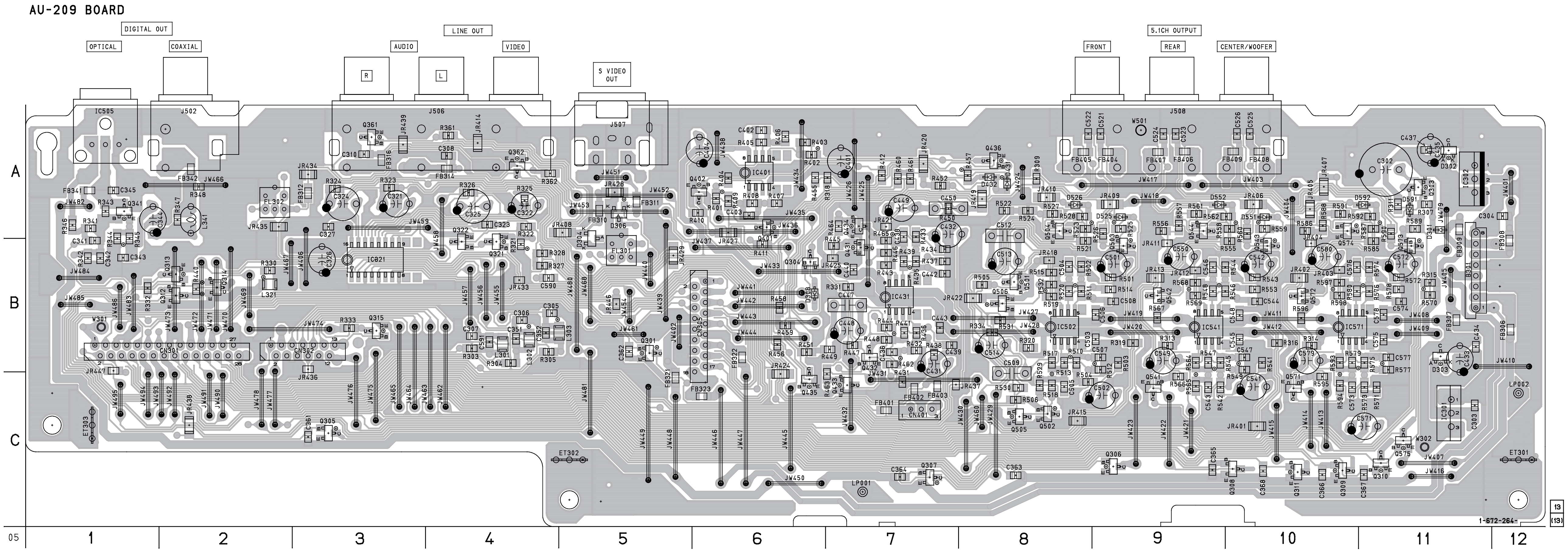
– Ref. No.: AU-209 board; 2,000 series –

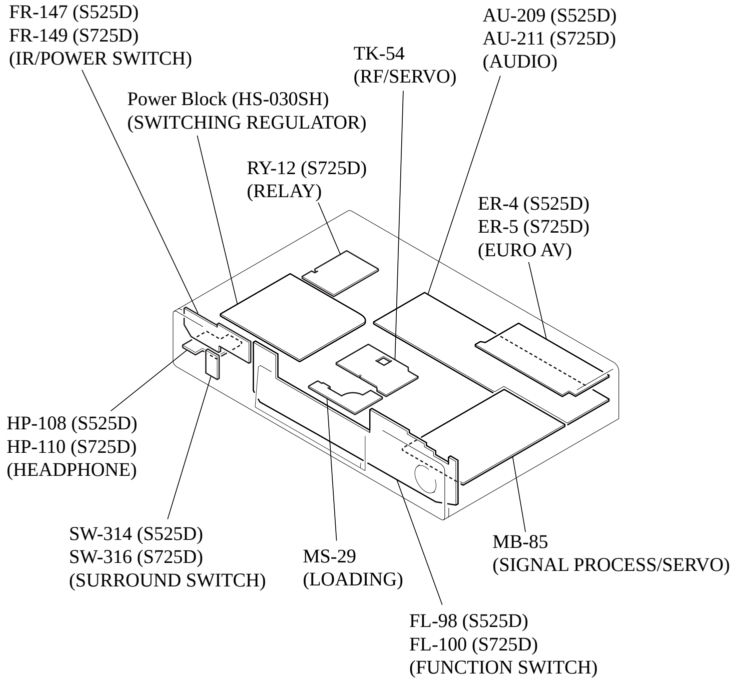
– DVP-S525D –

There are few cases that the part isn't mounted in this model is printed on this diagram.

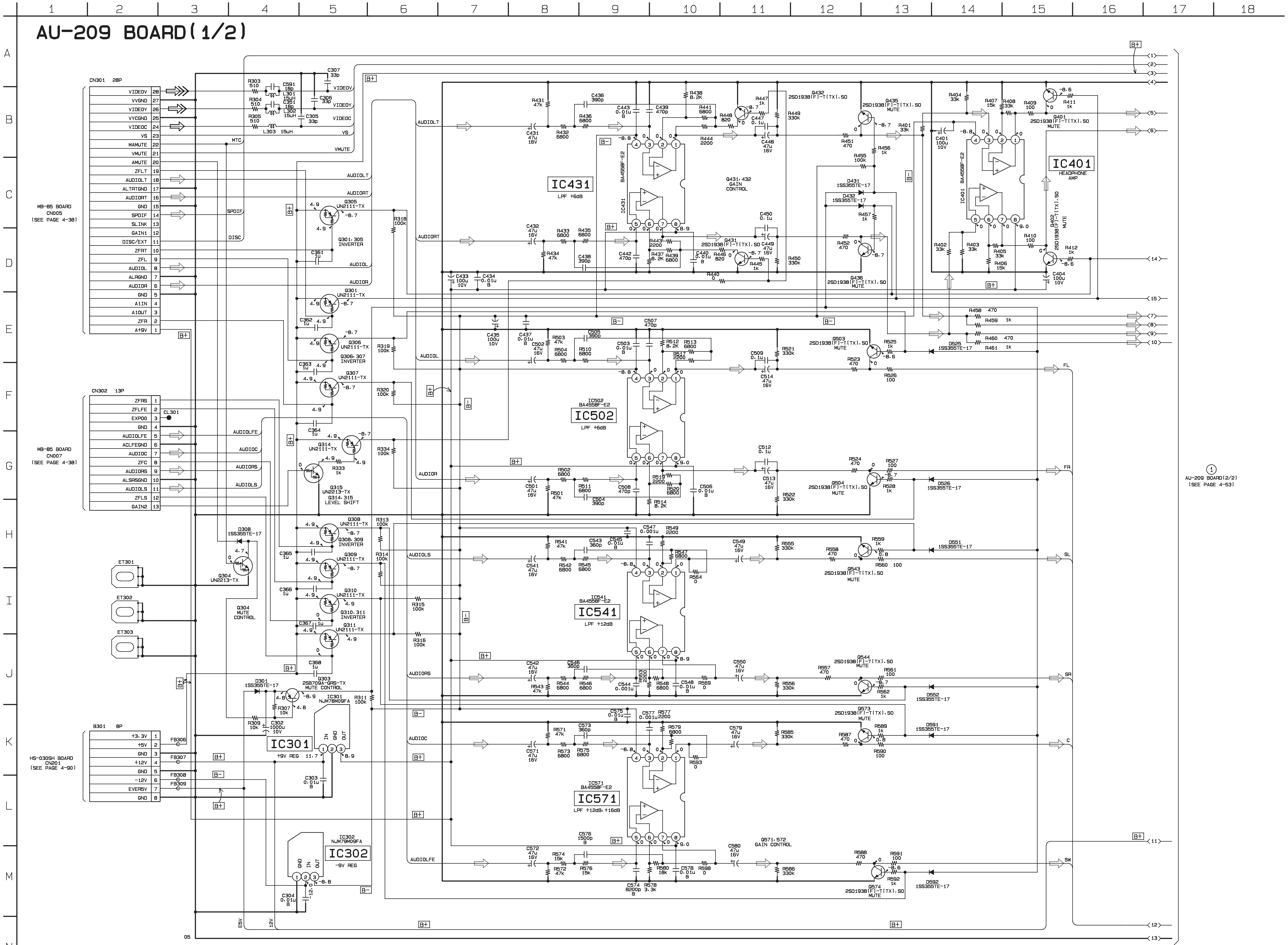
AU-209 BOARD

CN301	B-2
CN302	B-3
CN305	B-6
CN401	C-7
D301	A-11
D304	A-5
D306	A-5
D308	B-6
D431	A-8
D432	A-8
D525	A-9
D526	A-8
D551	A-10
D552	A-9
D591	A-11
D592	A-11
IC301	C-11
IC302	A-11
IC321	B-3
IC401	A-6
IC431	B-7
IC502	B-8
IC505	A-1
IC541	B-9
IC571	B-10
Q301	B-5
Q303	A-11
Q304	B-6
Q305	C-3
Q306	C-9
Q307	C-7
Q308	C-10
Q309	C-10
Q310	C-11
Q311	C-10
Q314	B-2
Q315	B-3
Q321	B-4
Q322	B-4
Q341	A-1
Q361	A-3
Q362	A-4
Q401	A-6
Q402	A-6
Q431	B-7
Q432	B-7
Q435	C-6
Q436	A-8
Q503	B-9
Q504	A-8
Q543	B-10
Q544	A-9
Q573	B-11
Q574	A-10





AU-209 (AUDIO) SCHEMATIC DIAGRAM
– Ref. No.: AU-209 board; 2,000 series –
– DVP-S525D –



NO MARK: DVD/CD PLAY
• SIGNAL PATH

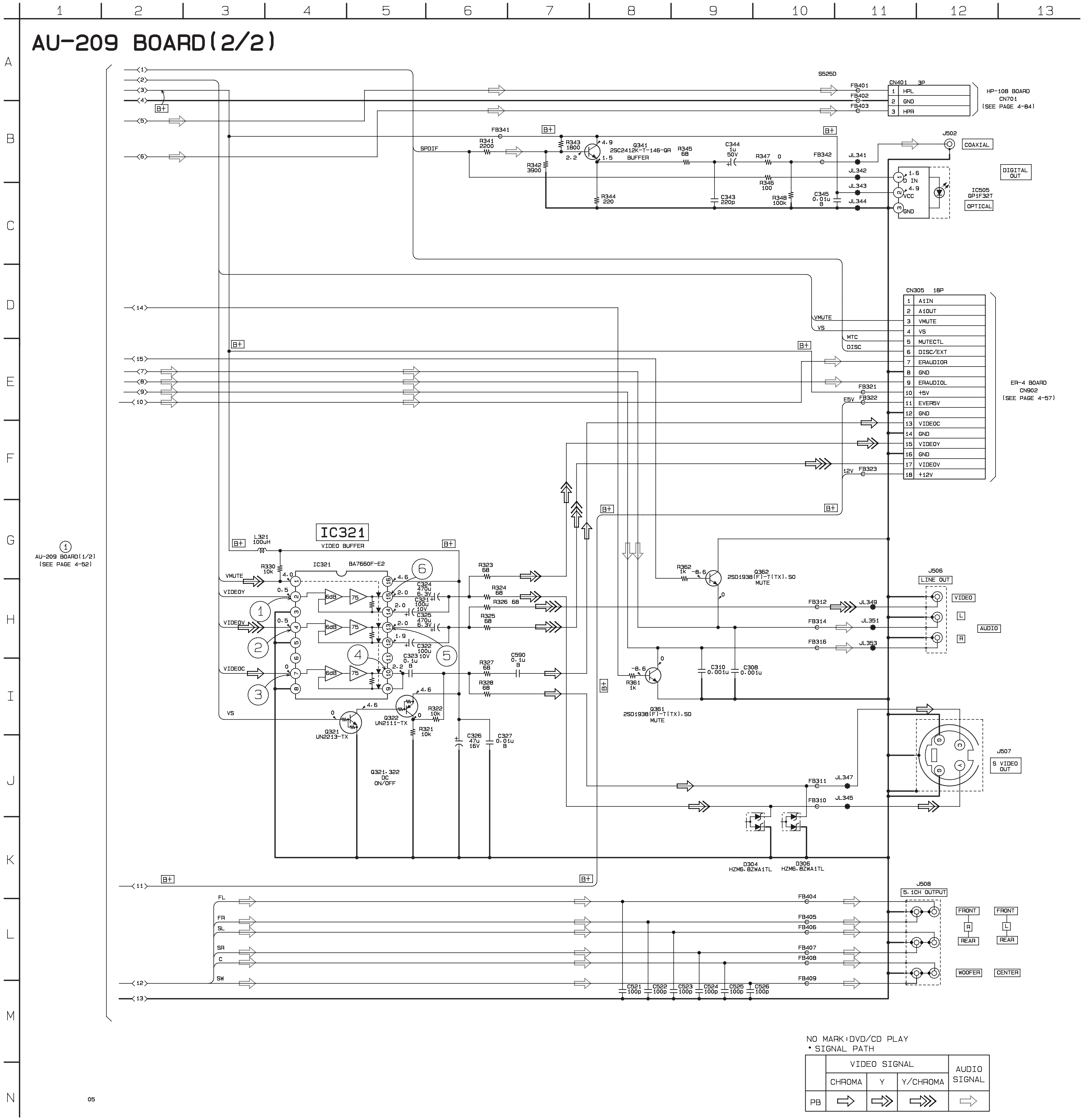
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇨	⇨	⇨	⇨

AUDIO
AU-209 (1/2)

AU-209 (VIDEO BUFFER) SCHEMATIC DIAGRAM • See page 4-49 for printed wiring board.

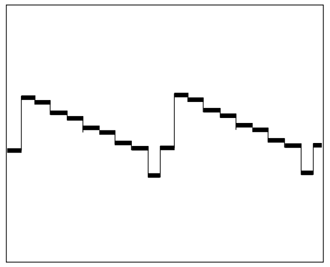
– Ref. No.: AU-209 board; 2,000 series –

– DVP-S525D –



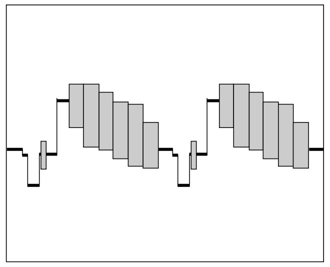
• **Waveforms**

❶ IC321 ②



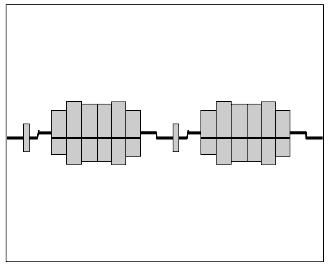
1.1 Vp-p (H)

❷ IC321 ④



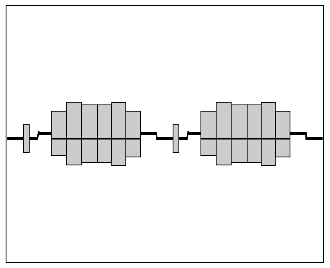
1.2 Vp-p (H)

❸ IC321 ⑦



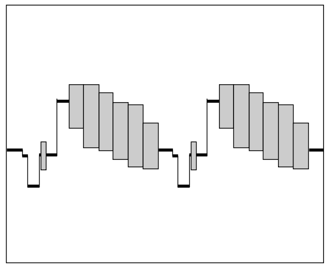
860 mVp-p (H)

❹ IC321 ⑩



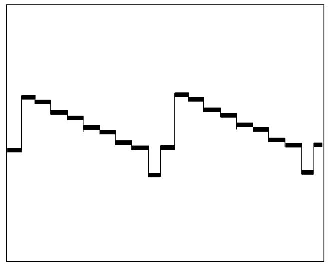
1.8 Vp-p (H)

❺ IC321 ⑬



2.4 Vp-p (H)

❻ IC321 ⑮



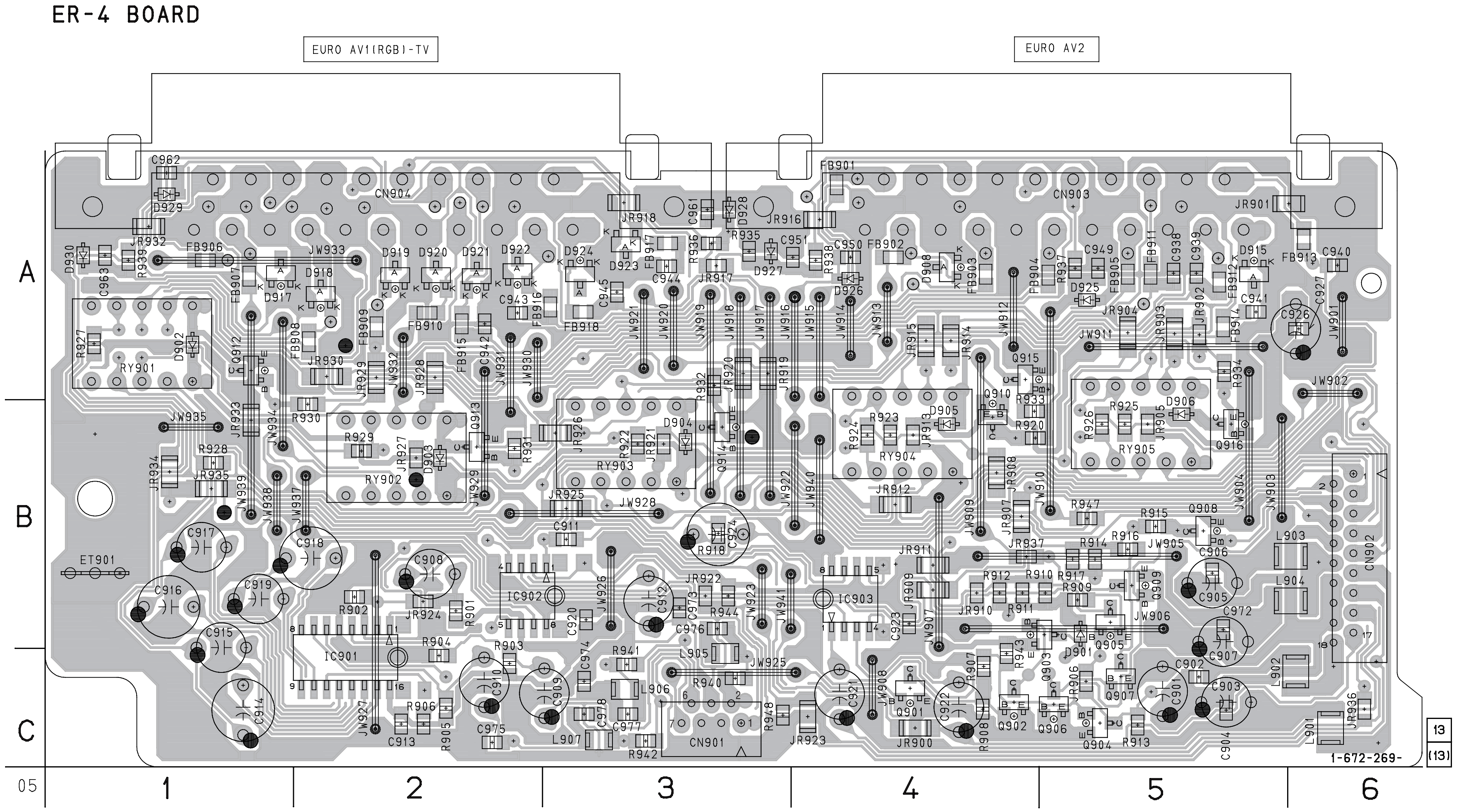
2.0 Vp-p (H)

ER-4 (EURO AV) PRINTED WIRING BOARD

– Ref. No.: ER-4 board; 2,000 series –

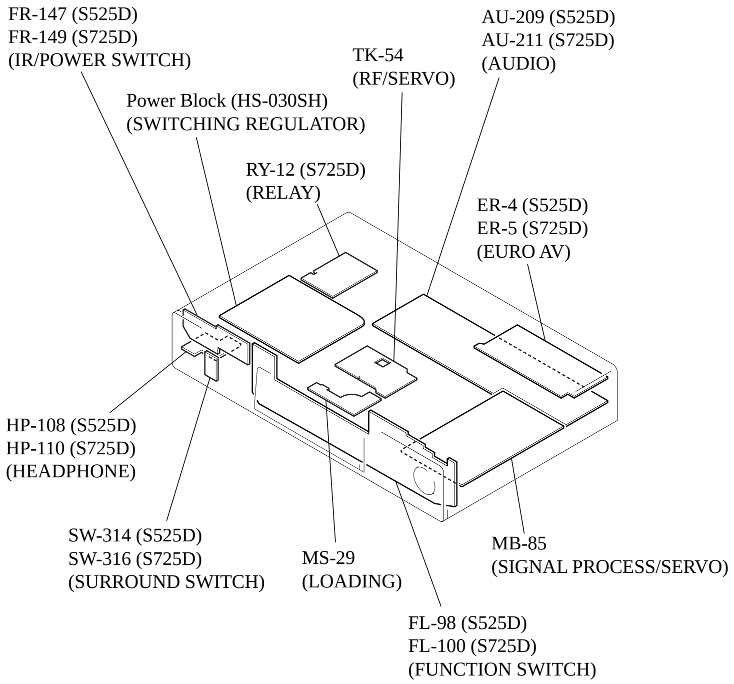
– DVP-S525D –

There are few cases that the part isn't mounted in this model is printed on this diagram.



ER-4 BOARD

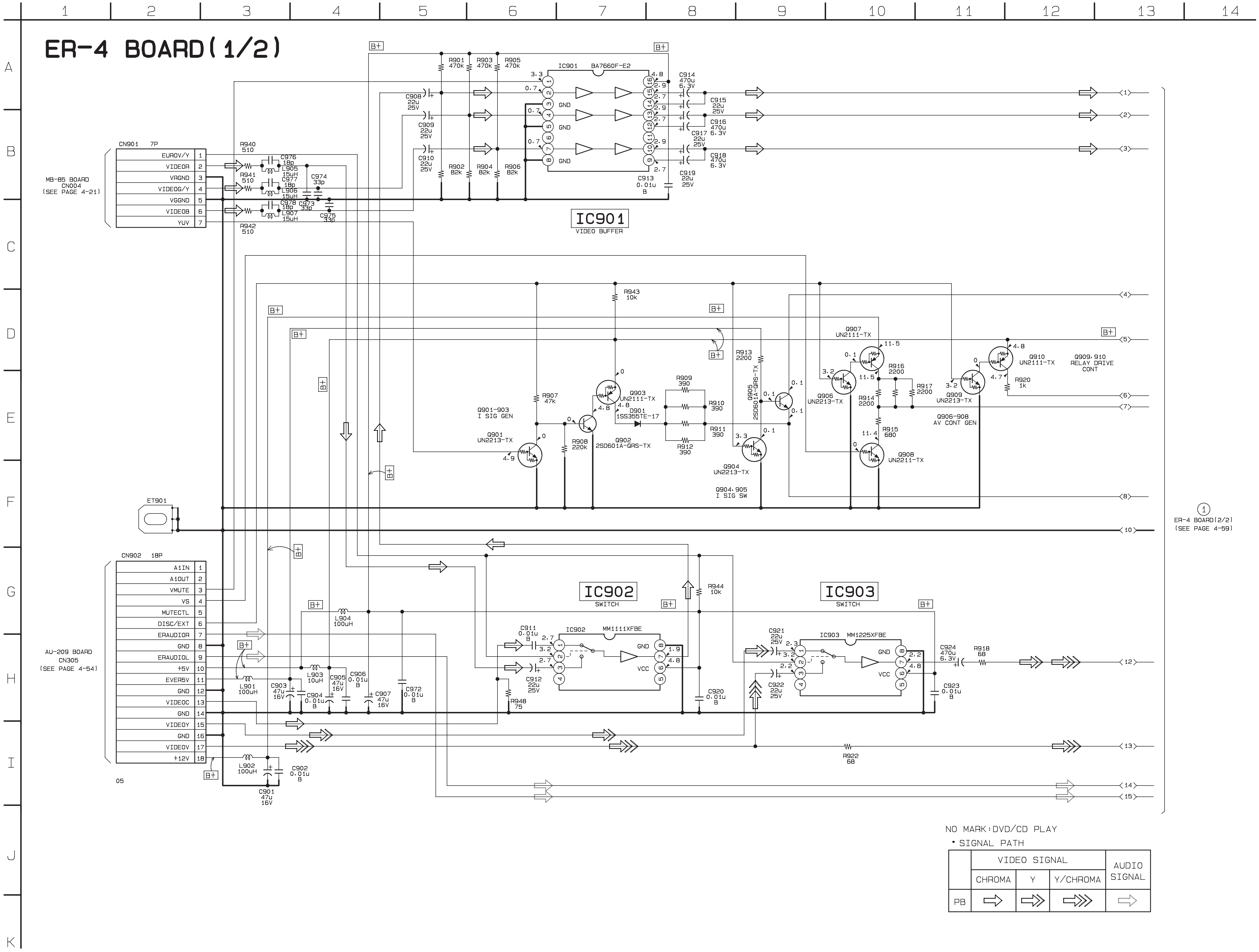
CN901	C-3
CN902	B-6
CN903	A-5
CN904	A-2
D901	B-5
D902	A-1
D903	B-2
D904	B-3
D905	B-4
D906	B-5
D908	A-4
D915	A-5
D917	A-1
D918	A-2
D919	A-2
D920	A-2
D921	A-2
D922	A-2
D923	A-3
D924	A-3
D926	A-4
D927	A-3
D929	A-1
D930	A-1
IC901	C-2
IC902	B-2
IC903	B-4
Q901	C-4
Q902	C-4
Q903	B-5
Q904	C-5
Q905	B-5
Q906	C-5
Q907	C-5
Q908	B-5
Q909	B-5
Q910	B-4
Q912	A-1
Q913	B-2
Q914	B-3
Q915	A-4
Q916	B-5



ER-4 (EURO AV1) SCHEMATIC DIAGRAM • **See page 4-55 for printed wiring board.**

– Ref. No.: ER-4 board; 2,000 series –

– DVP-S525D –

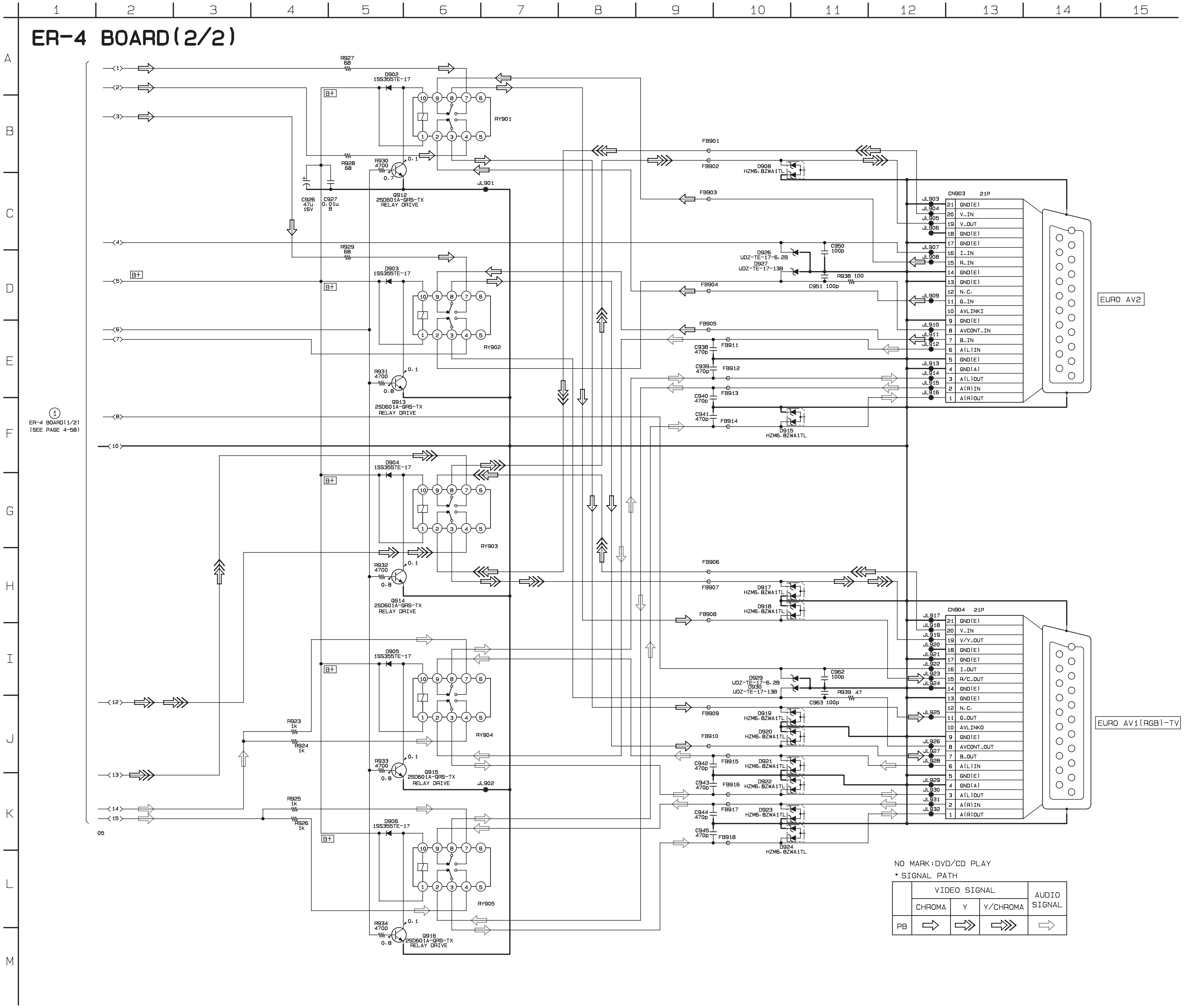


EURO AV1
ER-4 (1/2)

ER-4 (EURO AV2) SCHEMATIC DIAGRAM **• See page 4-55 for printed wiring board.**

– Ref. No.: ER-4 board; 2,000 series –

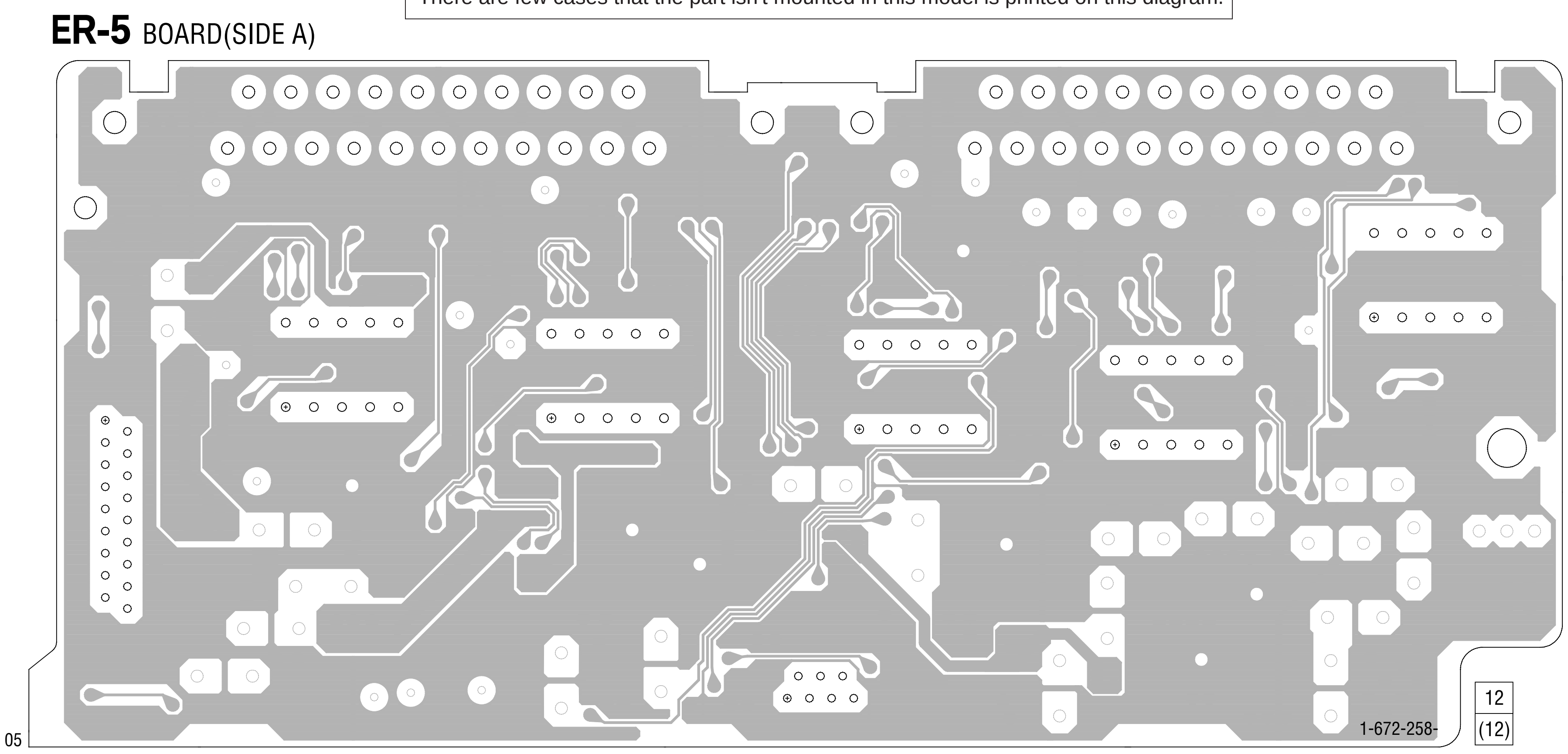
– DVP-S525D –

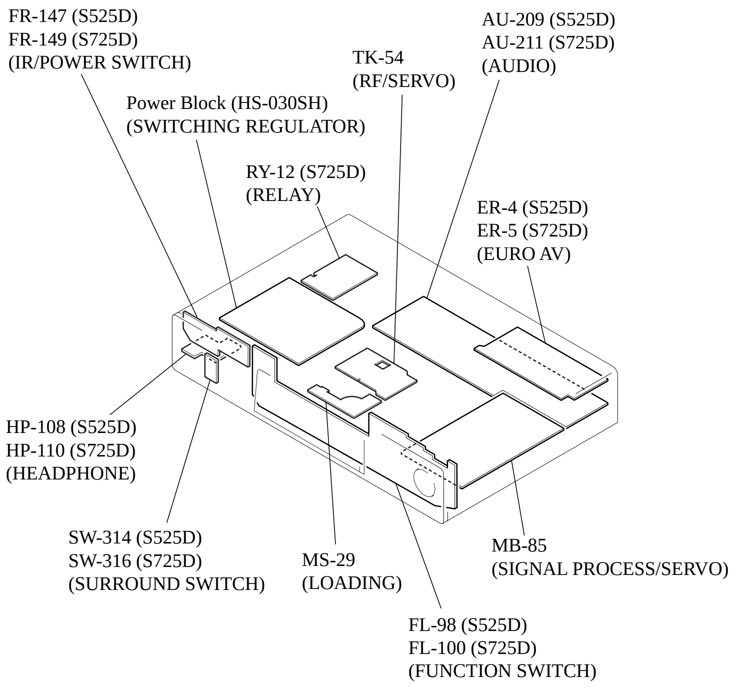


EURO AV2
ER-4 (2/2)

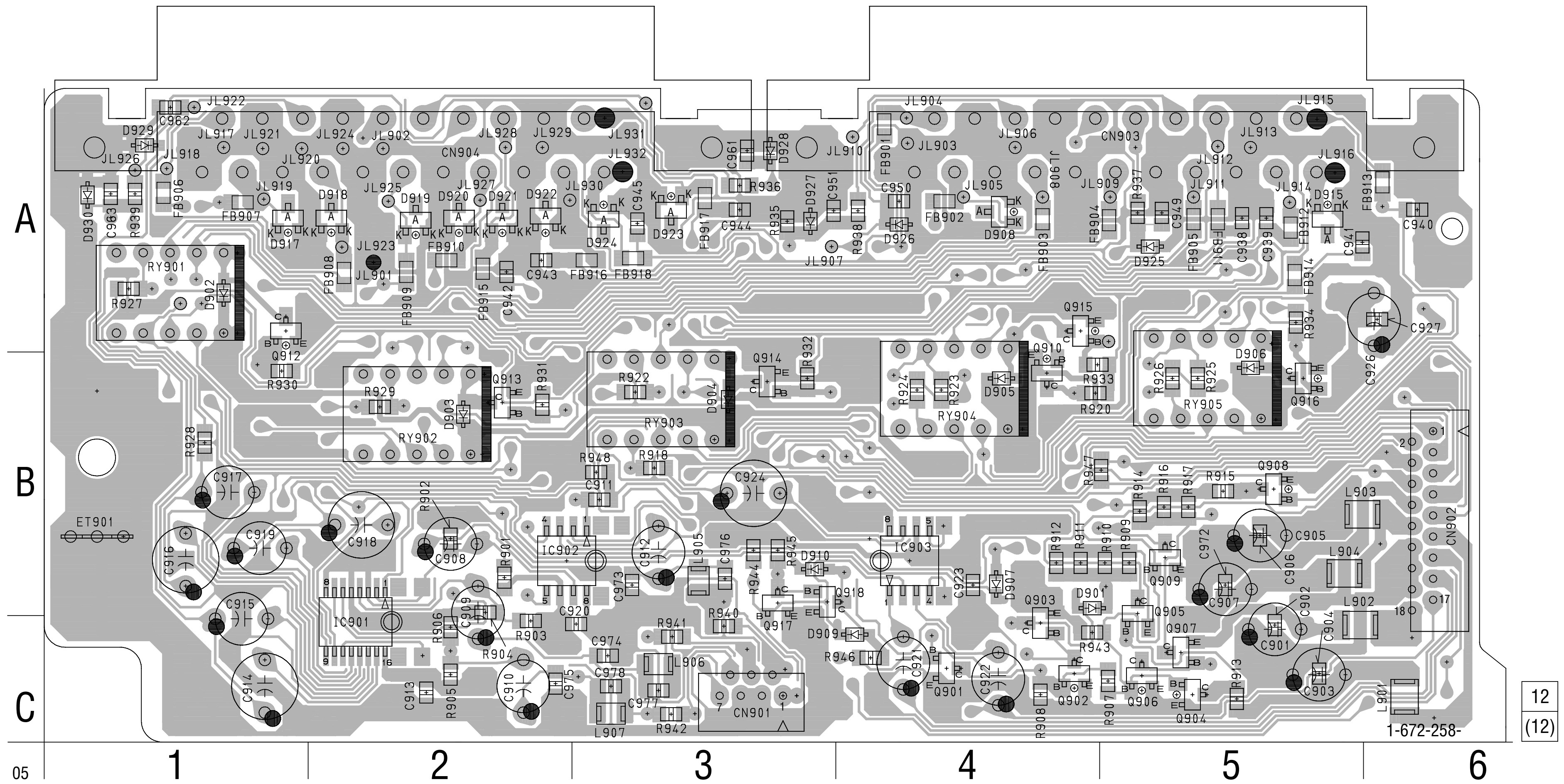
ER-5 (EURO AV) PRINTED WIRING BOARD
– Ref. No.: ER-5 board; 2,000 series –
– DVP-S725D –

There are few cases that the part isn't mounted in this model is printed on this diagram.





ER-5 BOARD(SIDE B)



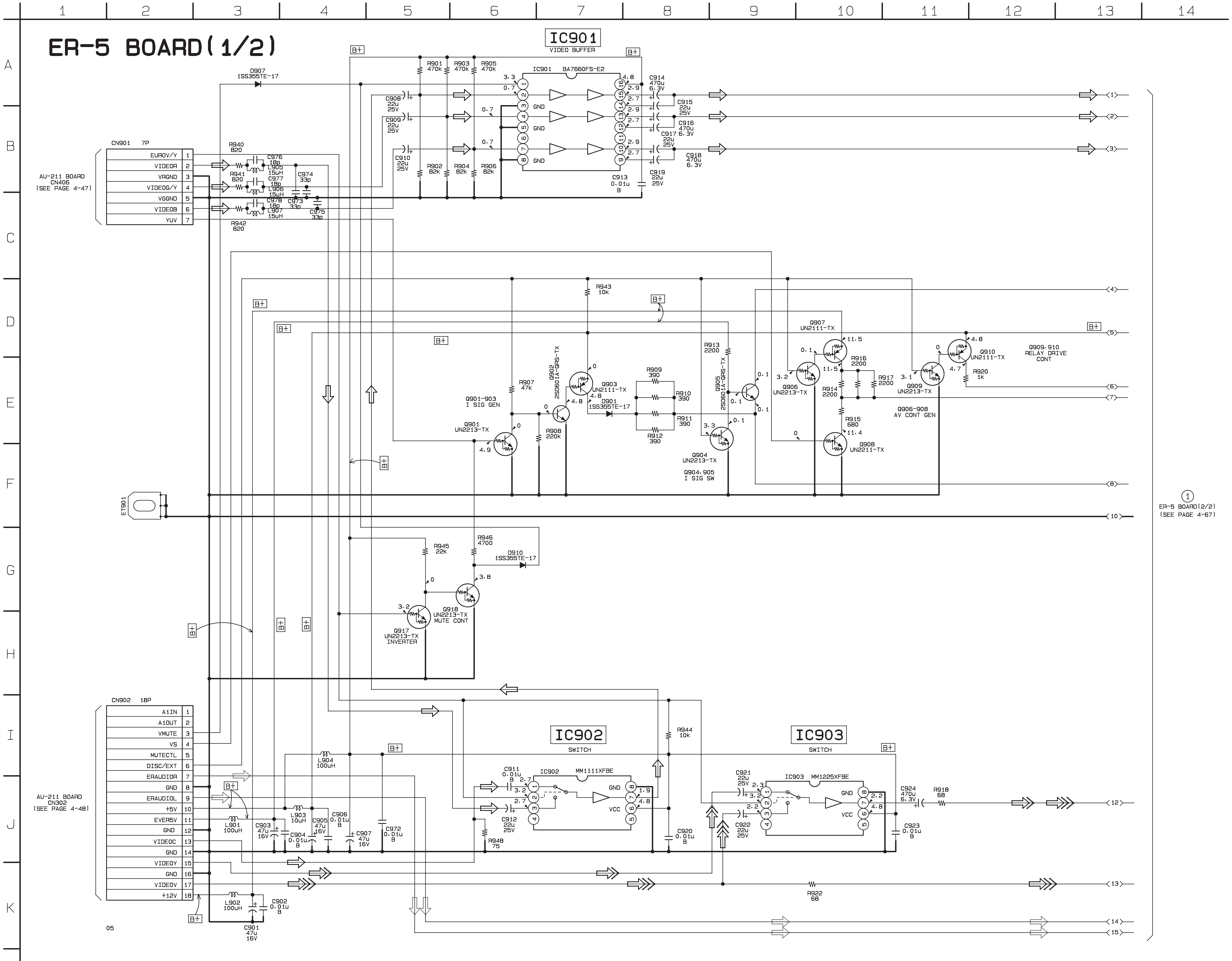
ER-5 BOARD (SIDE B)

CN901	C-3
CN902	B-6
CN903	A-5
CN904	A-2
D901	B-4
D902	A-1
D903	B-2
D904	B-3
D905	B-4
D906	B-5
D907	B-4
D908	A-4
D910	B-3
D915	A-5
D917	A-1
D918	A-2
D919	A-2
D920	A-2
D921	A-2
D922	A-2
D923	A-3
D924	A-3
D926	A-4
D927	A-3
D929	A-1
D930	A-1
IC901	C-2
IC902	B-2
IC903	B-4
Q901	C-4
Q902	C-4
Q903	C-4
Q904	C-5
Q905	B-5
Q906	C-5
Q907	C-5
Q908	B-5
Q909	B-5
Q910	B-4
Q912	A-1
Q913	B-2
Q914	B-3
Q915	A-4
Q916	B-5
Q917	B-3
Q918	B-3

ER-5 (EURO AV1) SCHEMATIC DIAGRAM • See page 4-61 for printed wiring board.

– Ref. No.: ER-5 board; 2,000 series –

– DVP-S725D –



NO MARK : DVD/CD PLAY

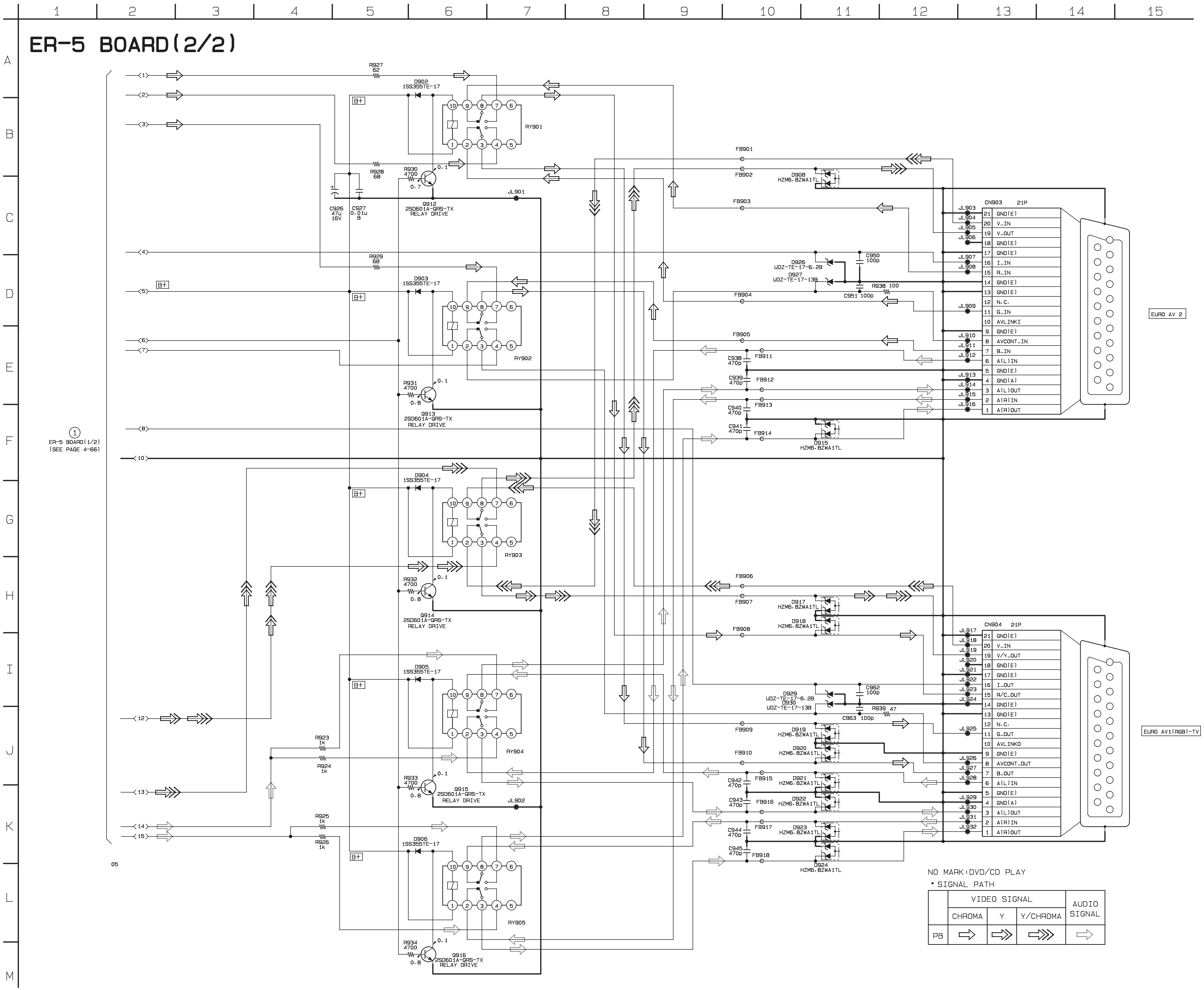
• SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇨	⇛	⇛⇛	⇨

ER-5 (EURO AV2) SCHEMATIC DIAGRAM • See page 4-61 for printed wiring board.

– Ref. No.: ER-5 board; 2,000 series –

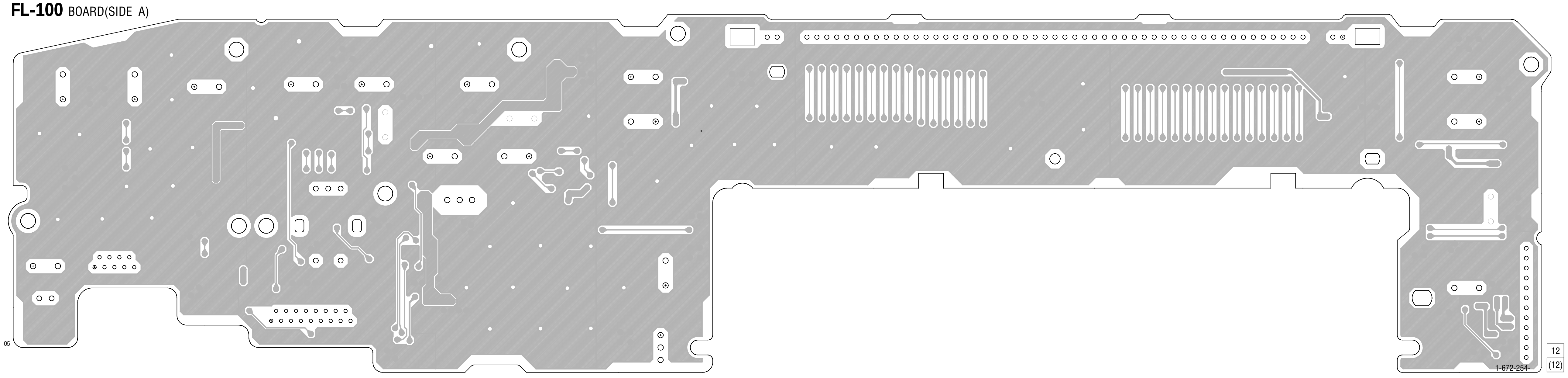
– DVP-S725D –

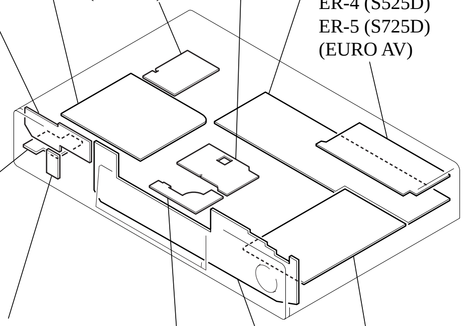


FL-100 (FUNCTION SWITCH, IF CON) PRINTED WIRING BOARD
– Ref. No.: FL-100 board; 2,000 series –
– DVP-S725D –

There are few cases that the part isn't mounted in this model is printed on this diagram.

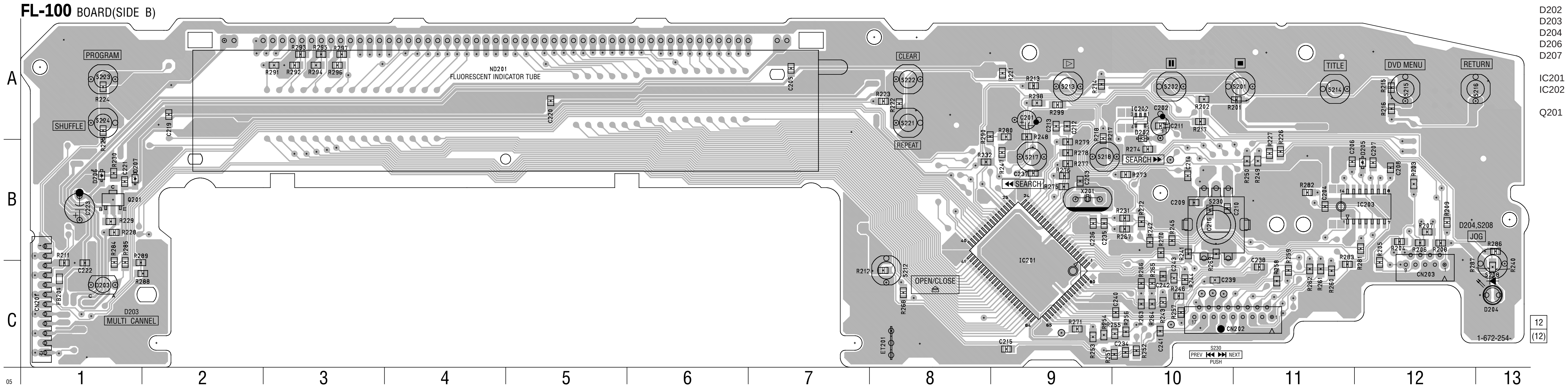
FL-100 BOARD(SIDE A)





FL-100 BOARD (SIDE B)

CN201	C-1
CN202	C-10
CN203	C-12
D202	A-10
D203	C-1
D204	C-13
D206	B-1
D207	B-1
IC201	B-9
IC202	A-10
Q201	B-1



FUNCTION SWITCH, IF CON
FL-100

FL-98 (FUNCTION SWITCH, IF CON) PRINTED WIRING BOARD

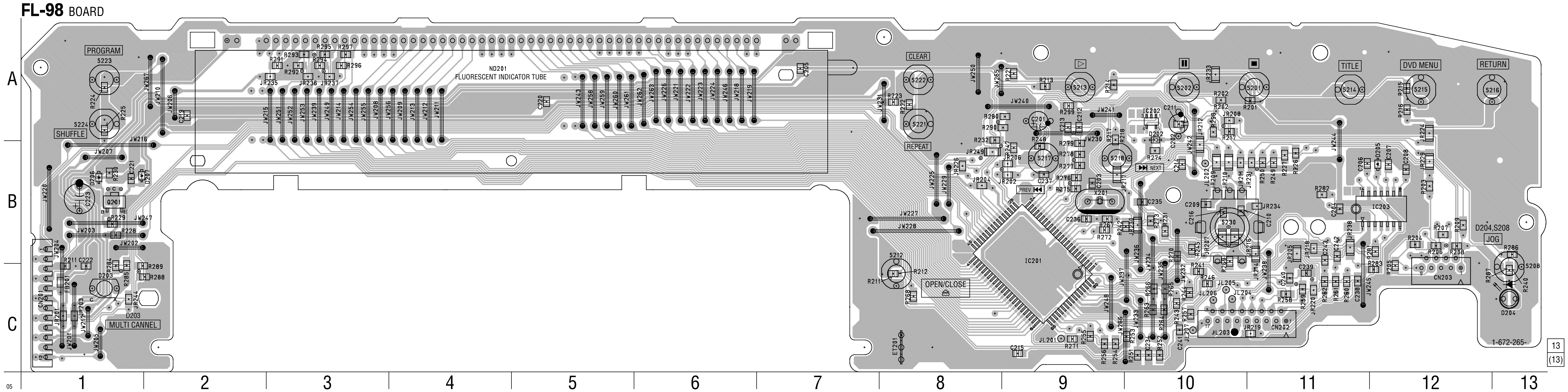
– Ref. No.: FL-98 board; 2,000 series –

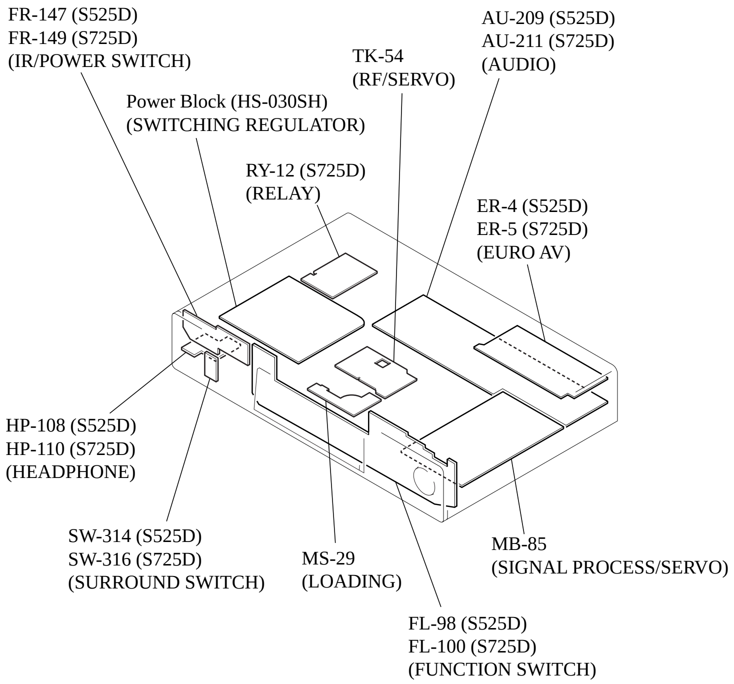
– DVP-S525D –

There are few cases that the part isn't mounted in this model is printed on this diagram.

FL-98 BOARD

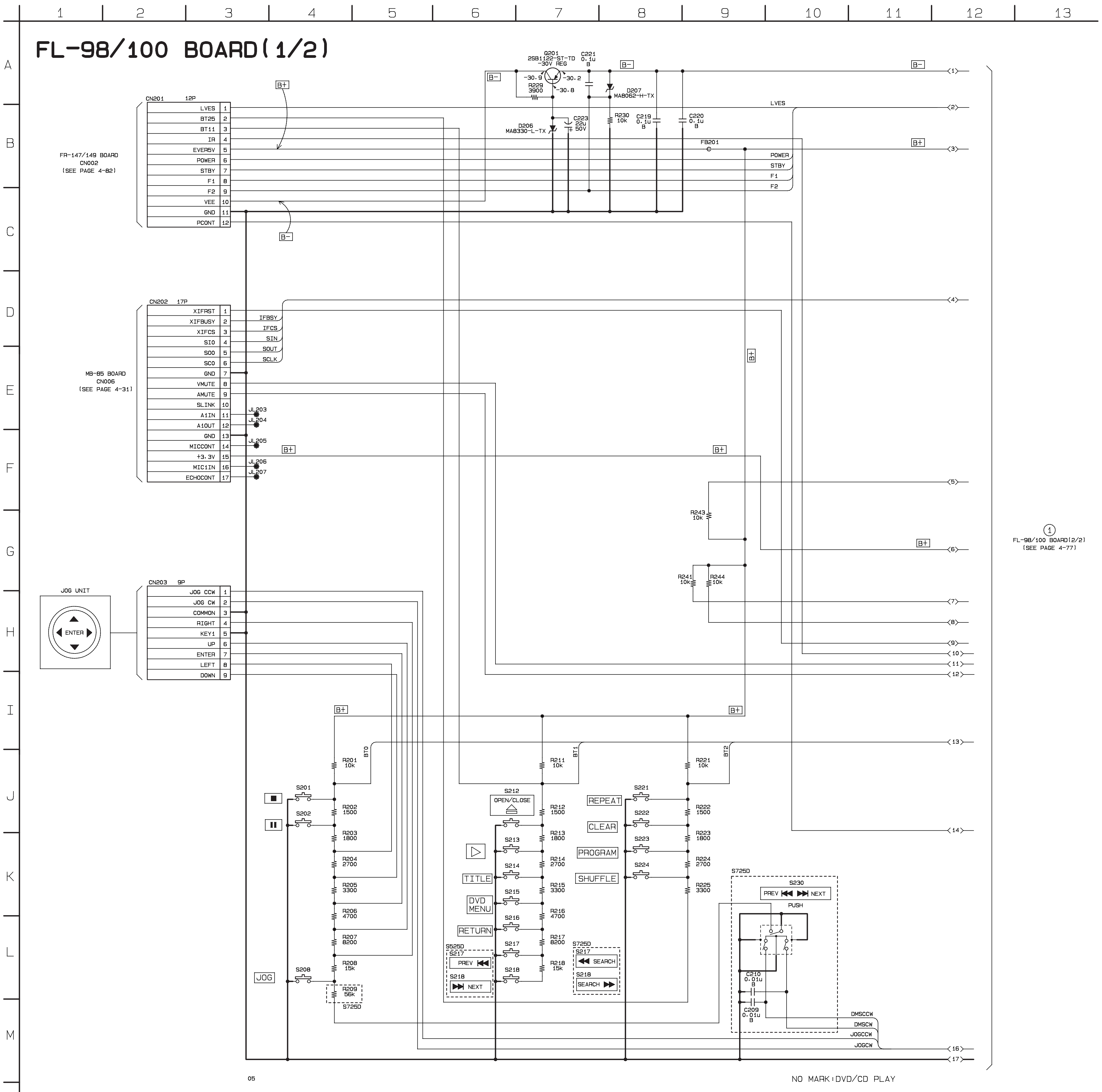
CN201	C-1	
CN202	C-10	
CN203	C-12	
D202	A-10	
D203	C-1	
D204	C-13	
D206	B-1	
D207	B-1	
IC201	B-9	
IC202	A-10	
Q201	B-1	





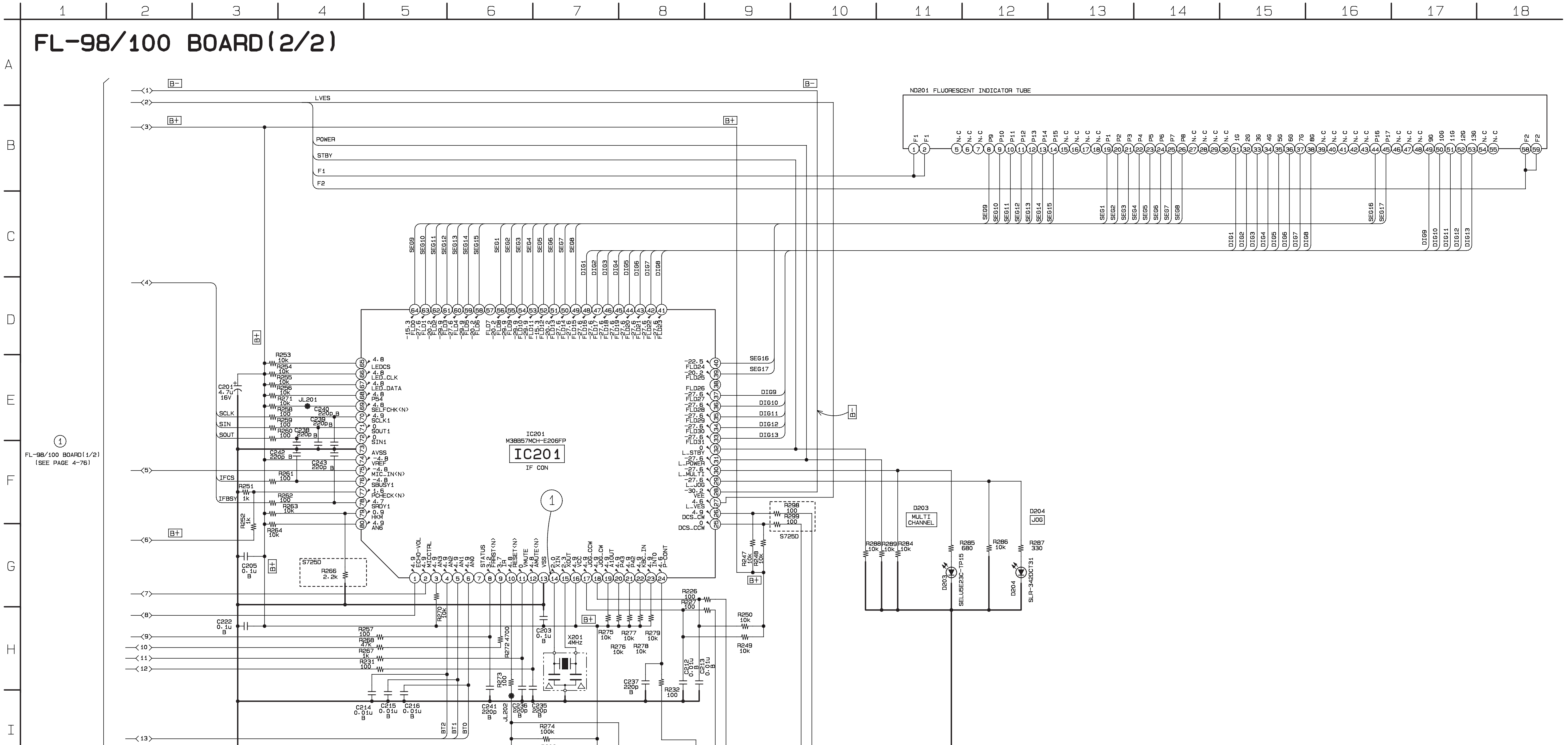
FL-98/100 (FUNCTION SWITCH) SCHEMATIC DIAGRAM • **See page 4-69 for printed wiring board.**

– Ref. No.: FL-98/100 board; 2,000 series –



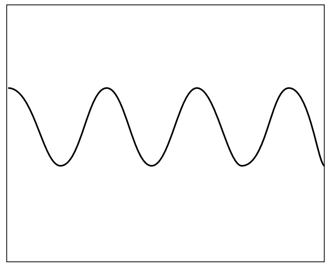
FUNCTION SWITCH
FL-98/100 (1/2)

FL-98/100 (IF CON) SCHEMATIC DIAGRAM • **See pages 4-69 and 4-73 for printed wiring board.**
– Ref. No.: FL-98/100 board; 2,000 series –



• Waveform

❶ IC201 ⑭



3.9 Vp-p (4 MHz)

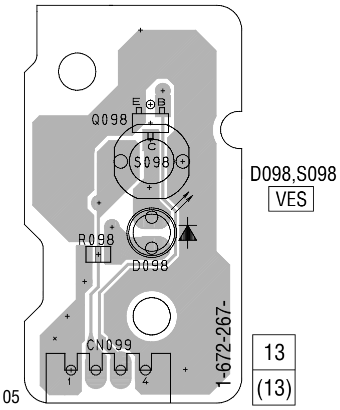
SW-314/316 (SURROUND SWITCH) PRINTED WIRING BOARDS

– Ref. No.: SW-314/316 board; 4,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

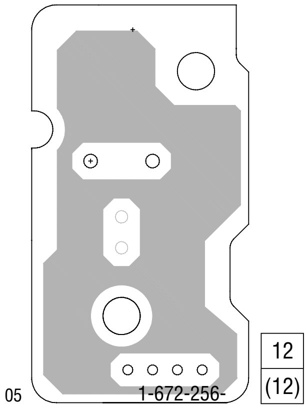
– DVP-S525D –

SW-314 BOARD

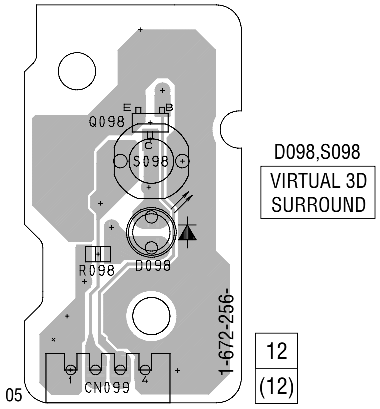


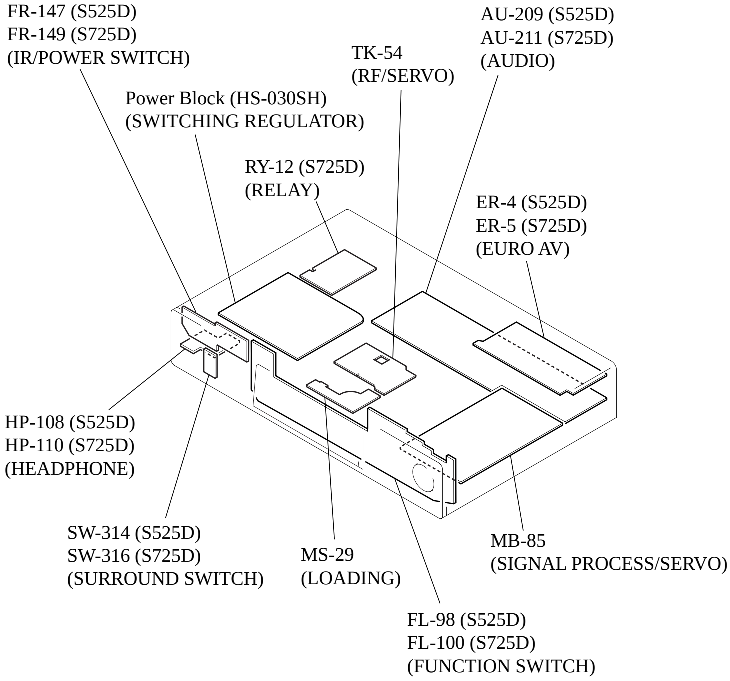
– DVP-S725D –

SW-316 BOARD (SIDE A)



SW-316 BOARD (SIDE B)





FL-147/149 (IR/POWER SWITCH) PRINTED WIRING BOARDS

– Ref. No.: FL-147/149 board; 4,000 series –

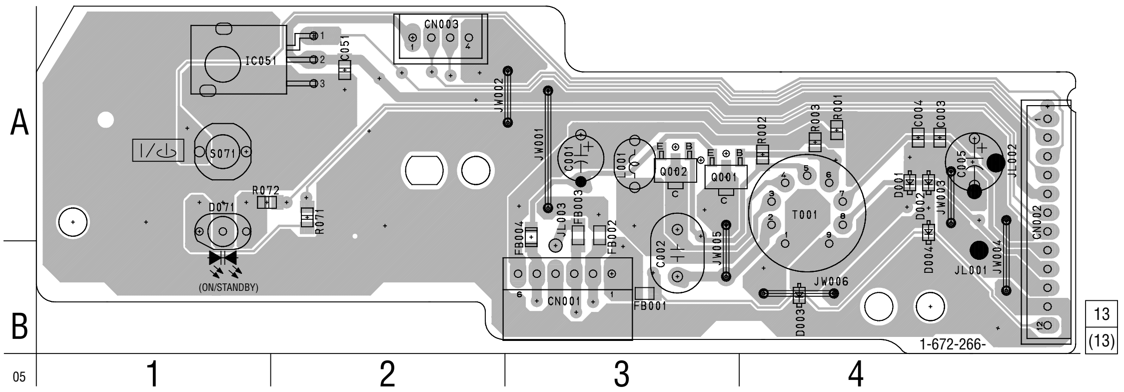
There are few cases that the part isn't mounted in this model is printed on this diagram.

– DVP-S525D –

FR-147 BOARD

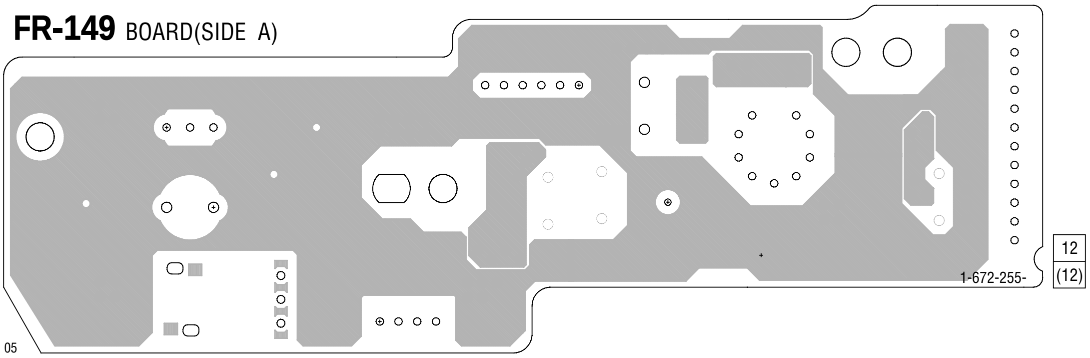
CN001	B-3
CN002	A-5
CN003	A-2
D001	A-4
D002	A-4
D003	B-4
D004	A-4
D071	A-1
IC051	A-1
Q001	A-3
Q002	A-3

FR-147 BOARD



– DVP-S725D –

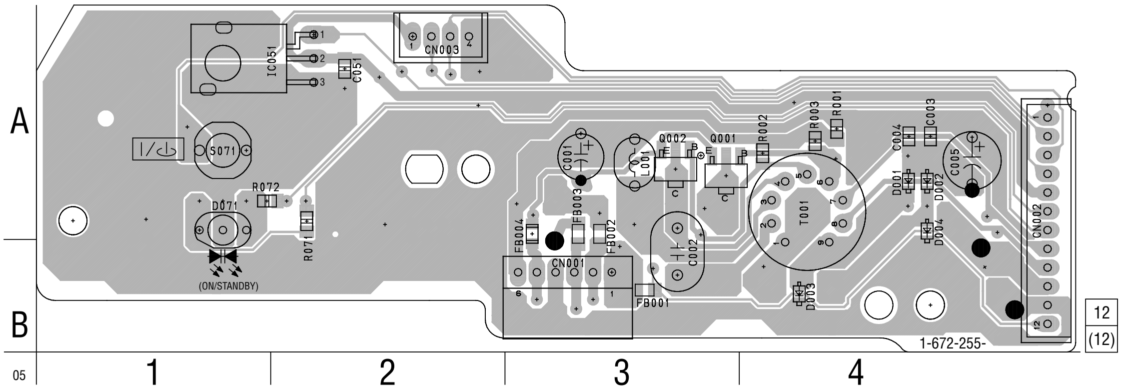
FR-149 BOARD(SIDE A)



FR-149 BOARD(SIDE B)

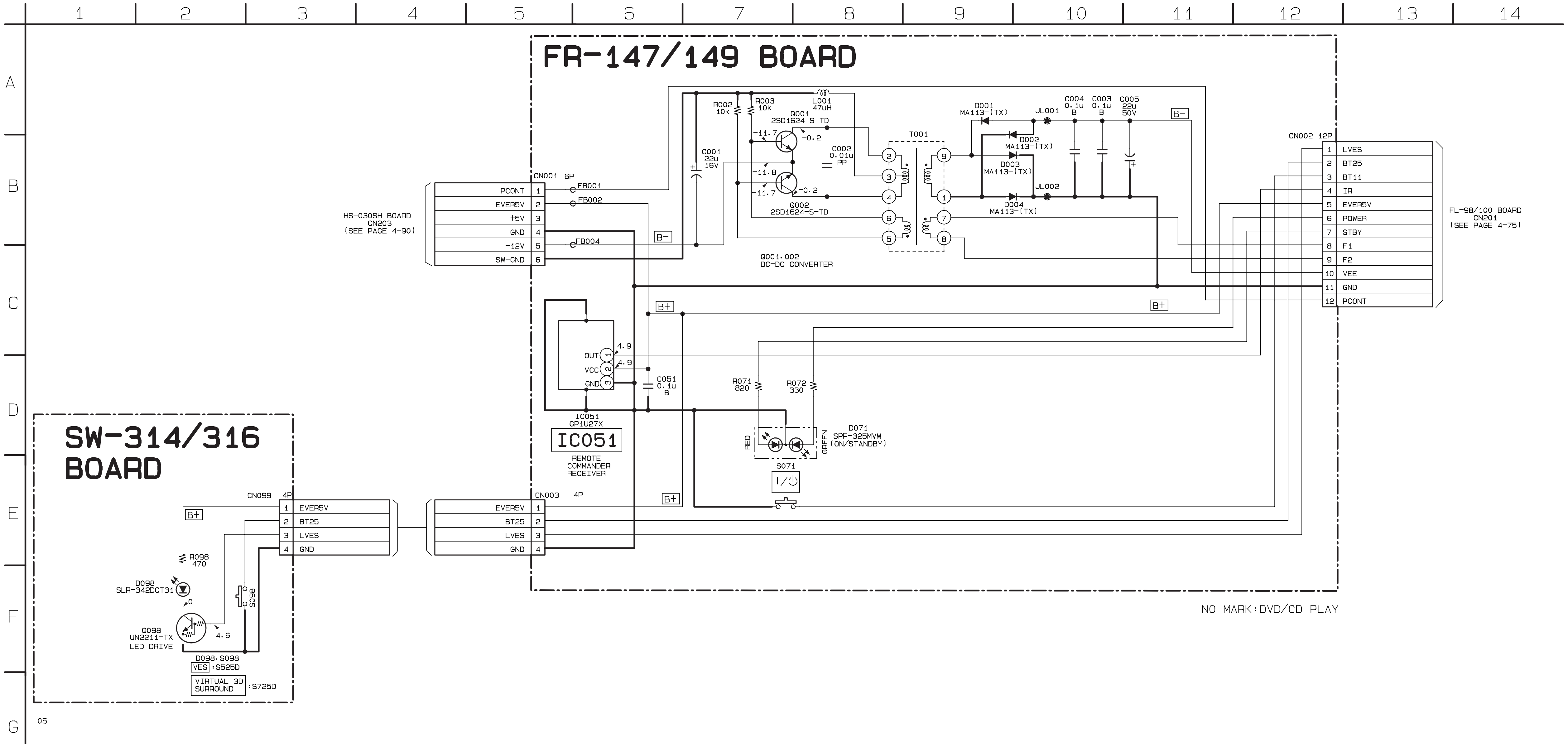
FR-149 BOARD (SIDE B)

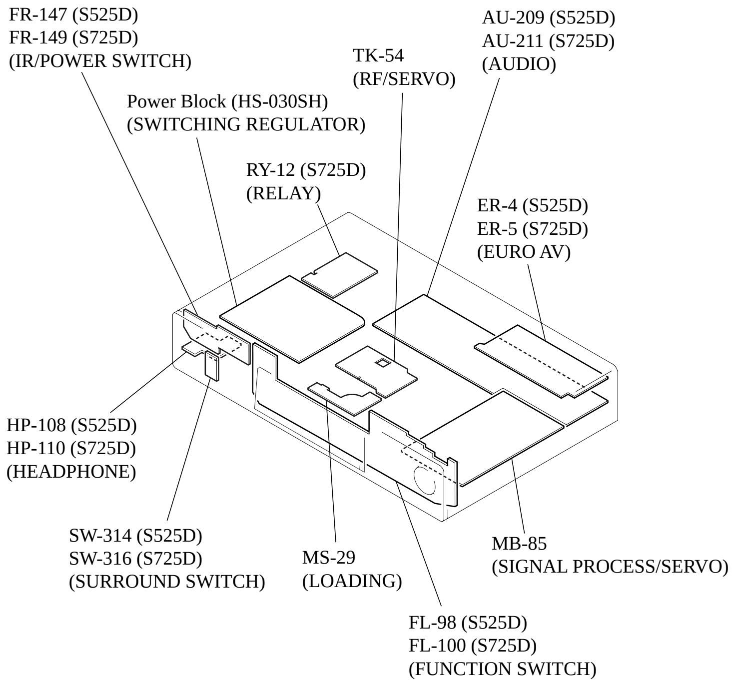
CN001	B-3
CN002	A-5
CN003	A-2
D001	A-4
D002	A-4
D003	B-4
D004	A-4
D071	A-1
IC051	A-1
Q001	A-3
Q002	A-3



SW-314/316 (SURROUND SWITCH), FR-147/149 (IR/POWER SWITCH) SCHEMATIC DIAGRAM **• See pages 4-79 for printed wiring board.**

– Ref. No.: SW-314/316 board and FR-147/149 board; 4,000 series –





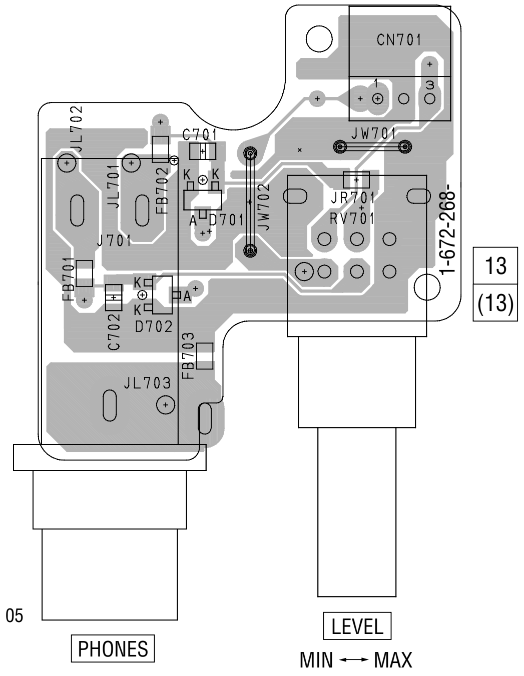
HP-108/110 (HEADPHONE) PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

– Ref. No.: HP-108/110 board; 2,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

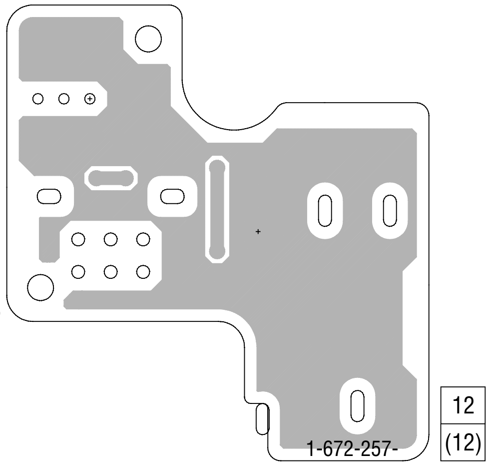
– DVP-S525D –

HP-108 BOARD

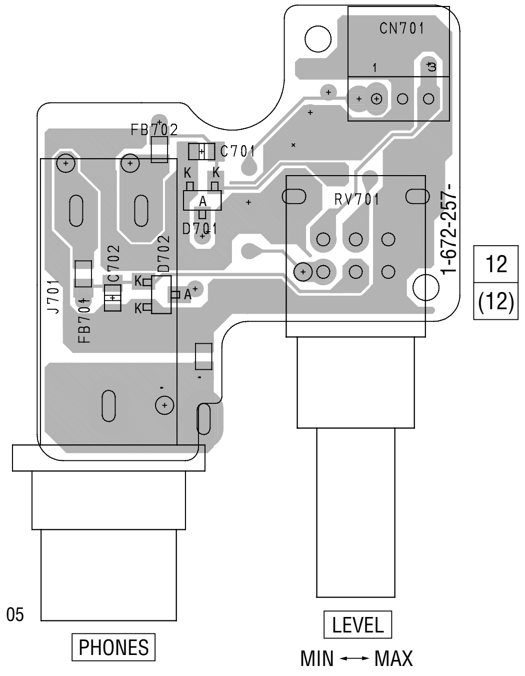


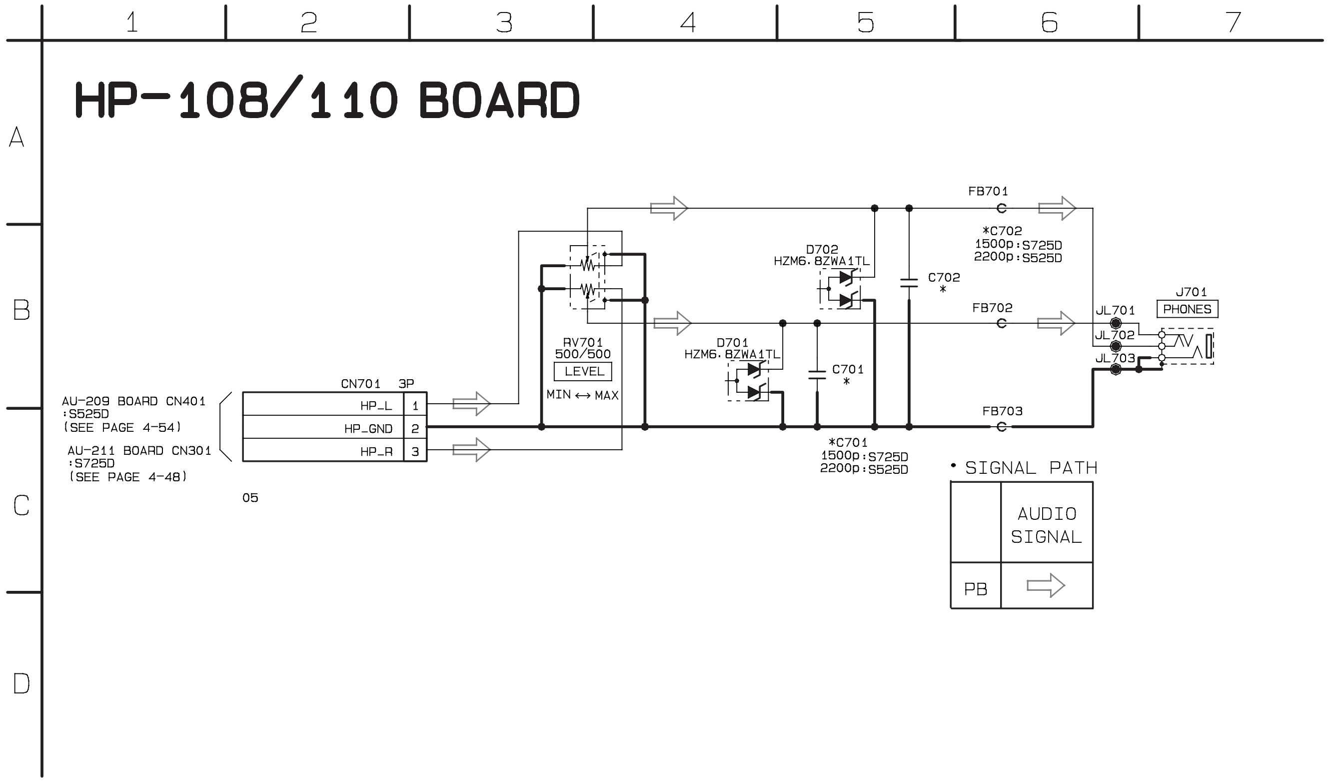
– DVP-S725D –

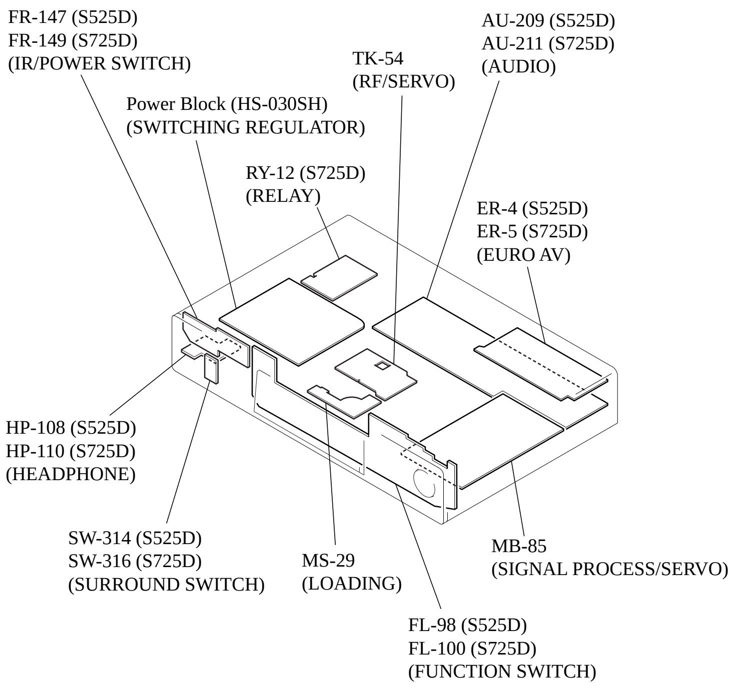
HP-110 BOARD(SIDE A)



HP-110 BOARD(SIDE B)





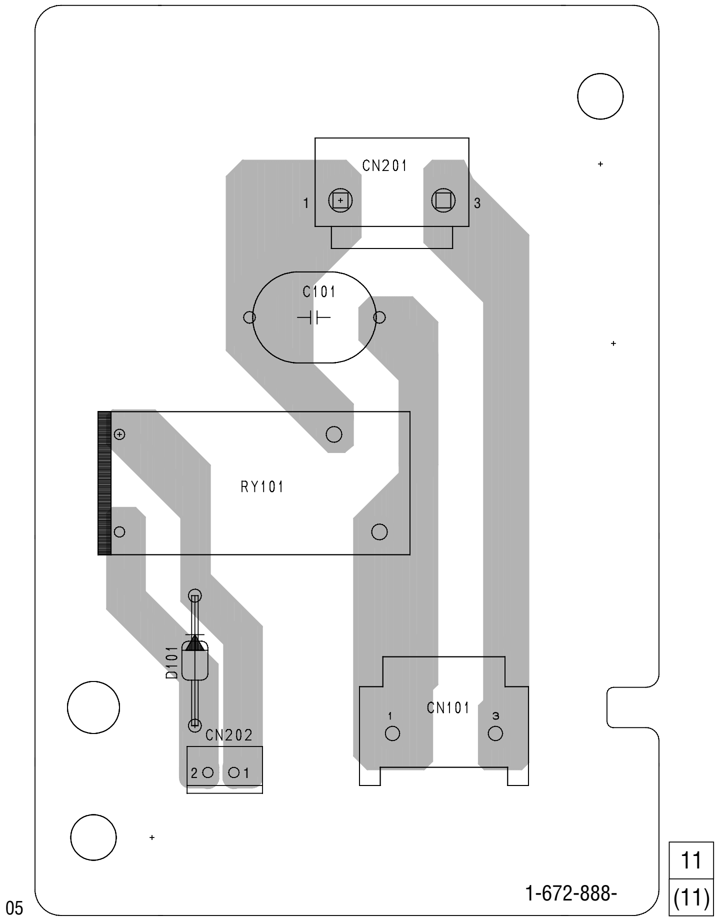


RY-12 (RELAY) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

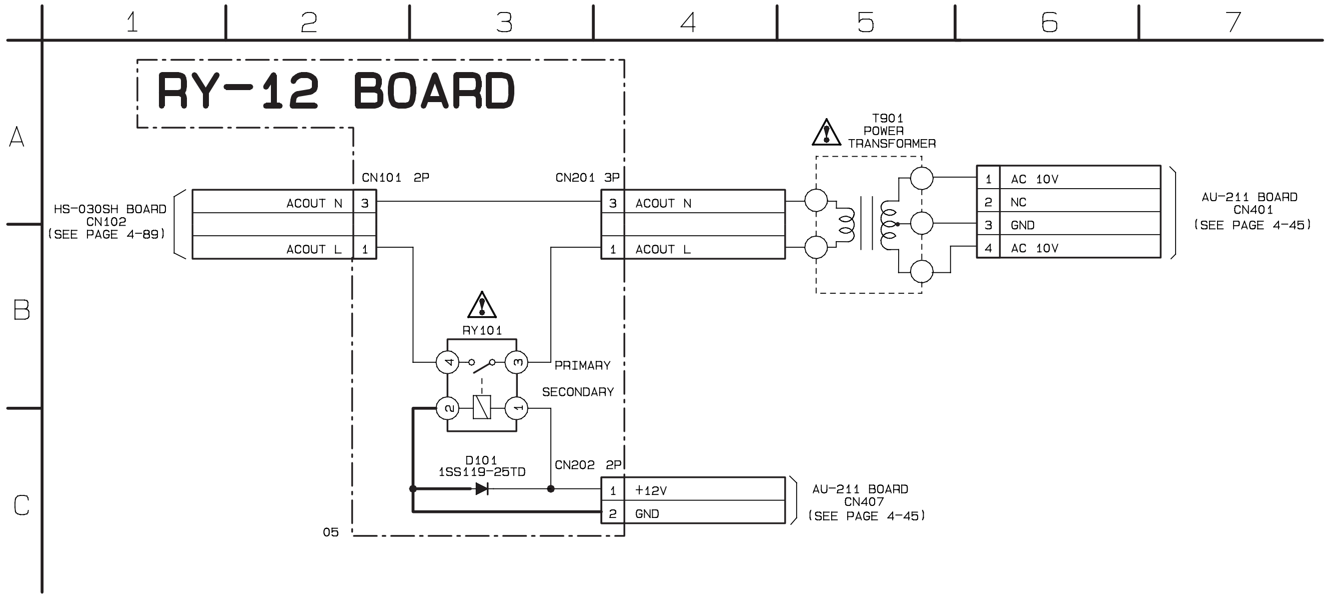
– Ref. No.: RY-12 board; 2,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

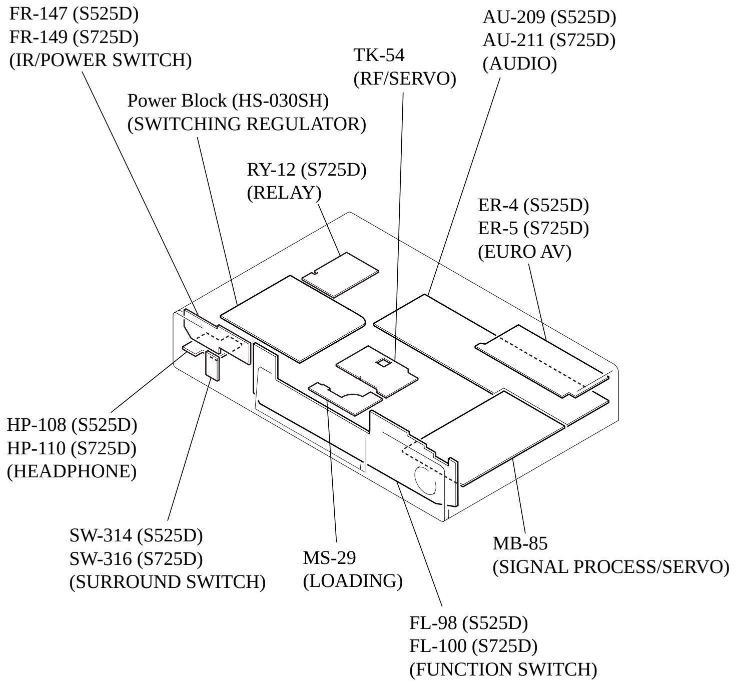
– DVP-S725D – **RY-12** BOARD



– DVP-S725D –



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.



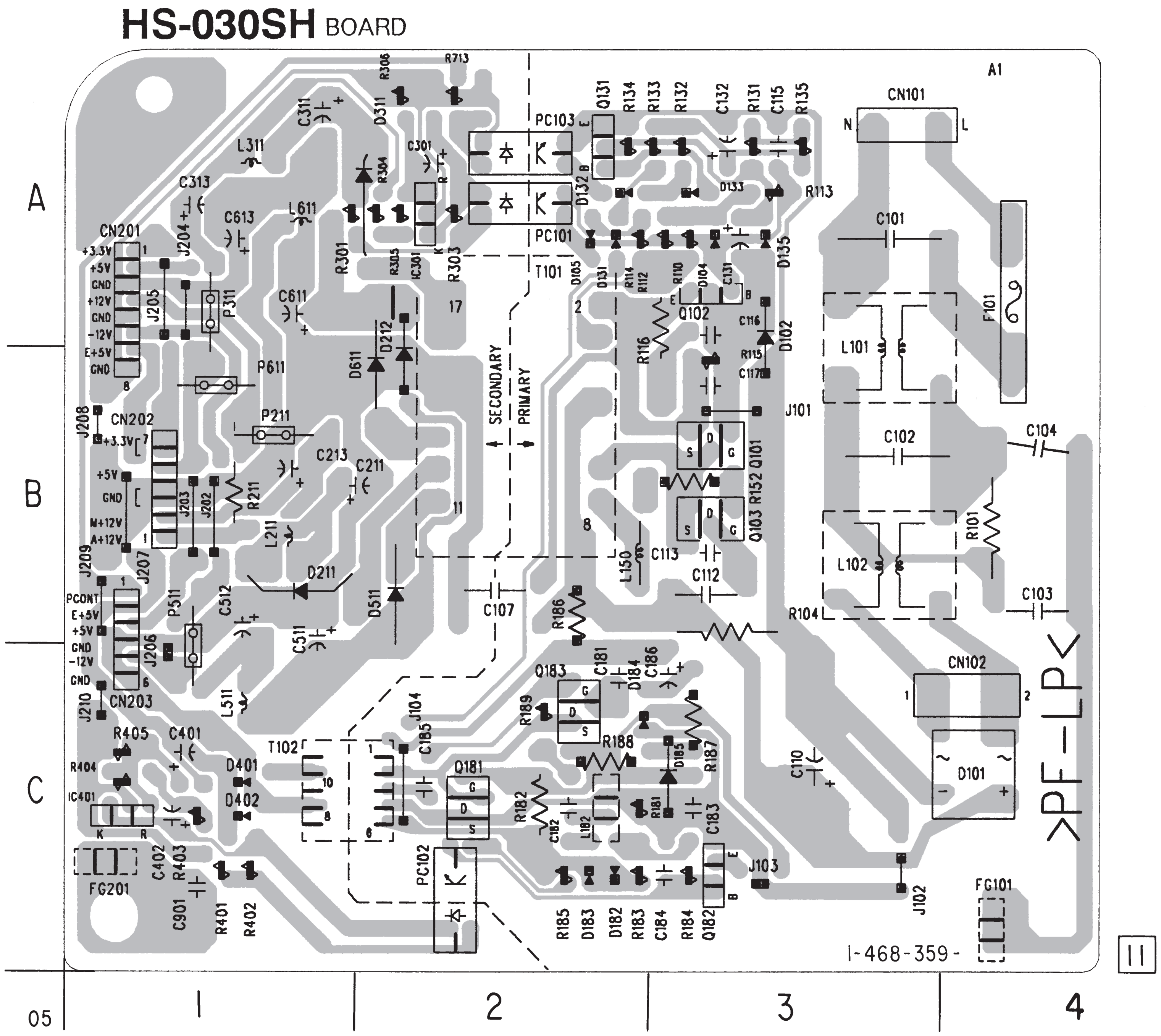
HS-030SH (SWITCHING REGULATOR) PRINTED WIRING BOARD

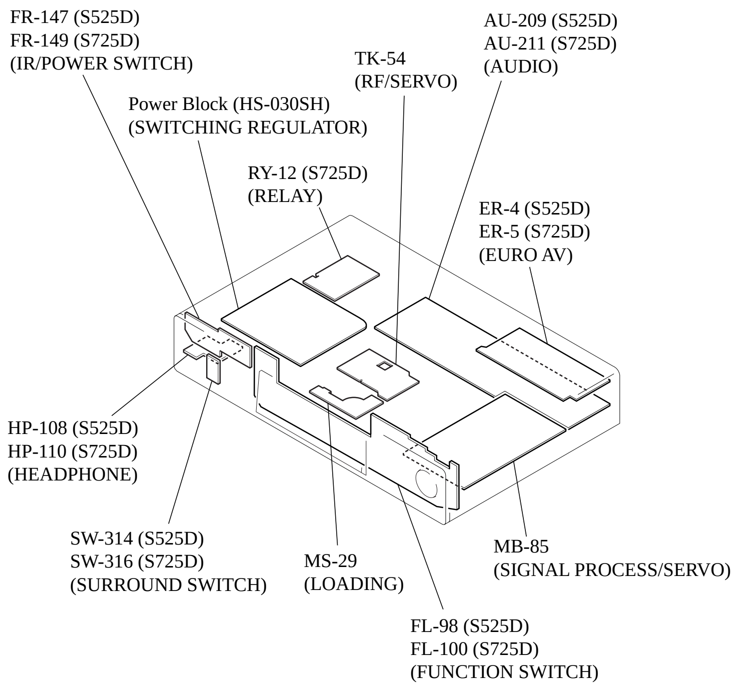
– Ref. No.: HS-030SH board; 6,000 series –

There are few cases that the part isn't mounted in this model is printed on this diagram.

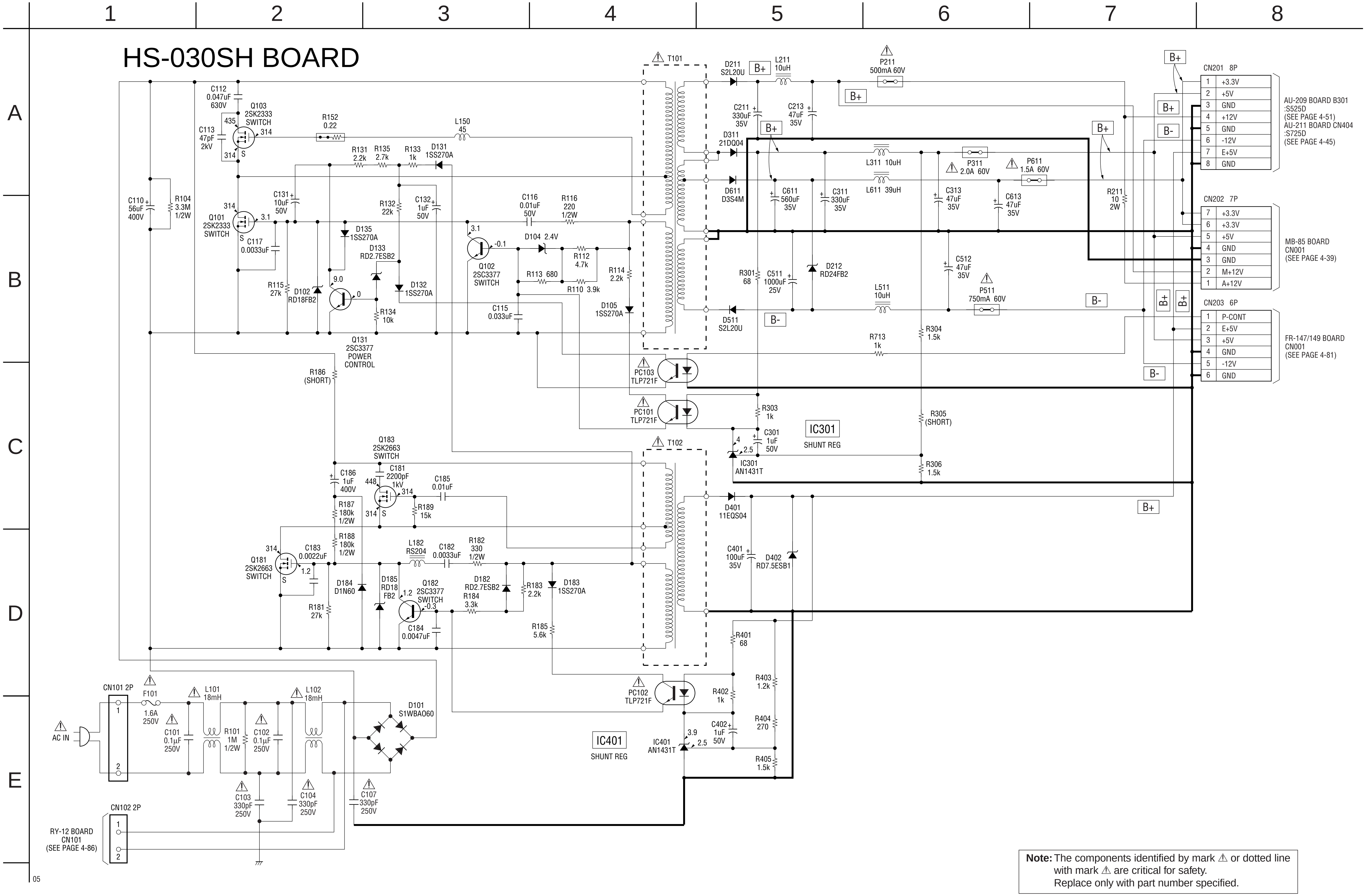
HS-030SH BOARD

CN101	A-3
CN102	C-4
CN201	A-1
CN202	B-1
CN203	B-1
D101	C-4
D102	A-3
D104	A-3
D105	A-2
D131	A-2
D132	A-2
D133	A-3
D135	A-3
D182	C-2
D183	C-2
D184	C-2
D185	C-3
D211	B-1
D212	B-2
D311	A-2
D401	C-1
D402	C-1
D511	B-2
D611	B-2
IC301	A-2
IC401	C-1
Q101	B-3
Q102	A-3
Q103	B-3
Q131	A-2
Q181	C-2
Q182	C-3
Q183	C-2





HS-030SH (SWITCHING REGULATOR) SCHEMATIC DIAGRAM
– Ref. No.: HS-030SH board; 6,000 series –



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. SYSTEM CONTROL PIN FUNCTION (MB-85 BOARD IC202)

Pin No.	Pin name	I/O	Function
1	PB5	O	Analog filter gain control
2	PB6	O	VES gain control “H”: VES
3	PB7	O	Rear CH boost control “H”: rear boost
4	VCC3	-	Power supply
5	CLK	O	CPU clock out (25 MHz)
6	$\overline{\text{CS5}}$	O	Not used
7	$\overline{\text{CS4}}$	O	Chip select signal for ARP, SERVO DSP and HGA
8	$\overline{\text{CS3}}$	O	Chip select signal for SDRAM and AV DEC
9	$\overline{\text{CS2}}$	O	Chip select signal for REG and AV DEC
10	$\overline{\text{CS1}}$	O	Chip select signal for external SRAM
11	$\overline{\text{CS0}}$	O	Chip select signal for external FLASH ROM
12	$\overline{\text{NMI}}$	I	Not used (fixed at “H”)
13	$\overline{\text{HST}}$	I	Not used (fixed at “H”)
14	$\overline{\text{RST}}$	I	Reset signal input from IF CON
15	GND	-	Ground
16	MD0	I	Input of mode select 0 (fixed at “1”)
17	MD1	I	Input of mode select 1 (fixed at “0”)
18	MD2	I	Input of mode select 2 (fixed at “0”)
19	RDY	I	Wait signal input
20	P81	I	Test terminal (fixed at “H”)
21	P82	I	Test terminal (fixed at “L”)
22	$\overline{\text{RD}}$	O	Read enable signal output
23	$\overline{\text{WR0}}$	O	High byte write enable signal output (16 bit and 8 bit)
24	$\overline{\text{WR1}}$	O	Low byte write enable signal output (16 bit only)
25-32	D16-D23	I/O	Data bus D0-D7 (16 bit)
33-39	D24-D30	I/O	Data bus D8-D14 (16 bit), D0-D6 (8 bit)
40	GND	-	Ground
41	D31	I/O	Data bus D15 (16 bit), D7 (8 bit)
42	A00	O	Address bus A0
43	VCC5	-	Power supply
44-64	A01-A21	O	Address bus A1-A21
65	GND	-	Ground
66	P66	O	PLL IC control output “H”: DOUBLE
67	P67	I	DIAG mode signal input “L”: DIAG
68	EOP0	I	Not used
69	AVCC	-	Power supply
70	AVRH	-	Reference power supply (+3.3V)
71	AGND	-	Ground
72	AN0	I	Set of mode 0
73	AN1	I	Set of mode 1
74	AN2	I	Set of mode 2
75	AN3	I	Set of mode 3 (fixed at “H”)
76	SI0	I	Serial data input from IF CON and EEPROM
77	SO0	O	Serial data output to IF CON and EEPROM
78	SC0	O	Serial clock output to IF CON and EEPROM
79	SI1	I	Serial bus 1 (for data input)
80	SO1	O	Serial bus 1 (for data output)
81	SI2	I	Serial bus 2 (for data input)
82	SO2	O	Serial bus 2 (for data output)
83	PF7	O	Reset signal output
84	DACK1	O	Output of DMA-ACK 0 to AV DEC
85	DACK0	O	Output of DMA-ACK 1 to AV DEC
86	DREQ1	I	Input of DMA-REQ 0 from AV DEC
87	DREQ0	I	Input of DMA-REQ 1 from AV DEC
88	INT3	I	Input of interrupt from HGA
89	SC1	O	Serial clock output
90	GND	-	Ground
91	X1	O	Clock output (12.5MHz)
92	X0	I	Clock input (12.5MHz)
93	VCC5	-	Power supply
94	INT1	I	Input of interrupt ARP and SERVO DSP
95	INT0	I	Input of interrupt from AV DEC
96	PB0	I	Rear panel lime input select (“H”: DISC “L”: EXT)
97	PB1	O	Chip select signal to IF CON
98	PB2	O	Chip select signal to DAC (Lt and Rt)
99	PB3	O	Chip select signal to DAC (L and R)
100	PB4	O	DVD/CD select (“H”: 44.1kHz “L”: 48kHz)

SECTION 6
TEST MODE

6-1. GENERAL DESCRIPTION

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

6-2. STARTING TEST MODE

Press [TITLE], [CLEAR], [POWER] buttons on the remote commander in this order with the power of main unit in OFF status, and the Test Mode starts, then the menu shown below will be displayed on the TV screen. At the bottom of menu screen, the model name and revision number are displayed.
To execute each function, select the desired menu and press its number on the remote commander.
To exit from the Test Mode, press the POWER button.

```
Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emergency History
5. Version Information
6. Video Level Adjustment
Exit: Power Key
_
Model    : DPX12xxxx
Revision: 1.xxxx
```

6-3. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander.
On the Test Mode Menu screen, press [0] key on the remote commander, and the following check menu will be displayed.

```
    ### Syscon Diagnosis ###
           Check Menu
0. Quit
1. All
2. Version
3. Peripheral
4. Servo
5. Supply
6. AV Decoder
7. Video
8. Audio
_
```

0. Quit
Quit the Syscon Diagnosis and return to the Test Mode Menu.

1. All
All items continuous check
This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

```
    ### Syscon Diagnosis ###

Diag All Check
No. 2 Version

 2-3. ROM Check Sum
Check Sum = xxxx



Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.
Following the message, press [NEXT] key to go to the next item, or [PREV] key to repeat the same check again. To quit the diagnosis and return to the Check Menu screen, press [STOP] or [ENTER] key. If an error occurred, the diagnosis is suspended and the error code is displayed as shown below.

```
    ### Syscon Diagnosis ###




 3-3. EEPROM Check
Error 03: EEPROM Write/Reed N
Address    : 00000001
Write Data : 2492
Read Data  : 2490
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

Press [STOP] key to quit the diagnosis, or [PREV] key to repeat the same item where an error occurred, or [NEXT] key to continue the check from the item next to faulty item.

Subnemu

Selecting 2 and subsequent items calls the submenu screen of each item.
For example, if “5. Supply” is selected, the following submenu will be displayed.

```
    ### Syscon Diagnosis ###
           Check Menu
          No. 5 Supply
0. Quit
1. All
2. ARP Register Check
3. ARP to RAM Data Bus
4. ARP to RAM Address Bus
5. ARP RAM Check
_
```

0. Quit
Quit the submenu and return to the main menu.

1. All
All submenu items continuous check
This menu checks 2 and subsequent items successively. At the item where visual check is required for judgment or an error occurred, the checking is suspended and the message is output for key entry.

Normally, all items are checked successively one after another automatically unless an error is found.
Selecting 2 and subsequent items executes respective menus and outputs the results.
For the contents of each submenu, see "Check Items List".

General Description of Checking Method

2. Version

(2-2) Revision
ROM revision number is displayed.
Error: Not detected.
The revision number defined in the source file of ROM (IC206) is displayed with four digits.

(2-3) ROM Check Sum
Check sum is calculated.
Error: Not detected.
The 8-bit data are added at addresses 0x000F0000 ~ 0x002EFFFF of ROM (IC206) and the result is displayed with 4-digit hexadecimal number. Error is not detected. Compare the result with the specified value.

(2-4) Model Type
Model code is displayed.
Error: Not detected.
The model code read from EEPROM (IC201) is displayed with 2-digit hexadecimal number.

	Model Type	
DVP-S525D	2	3
DVP-S725D	4	3

(2-5) Region
Region code is displayed.
Error: Not detected.
The region code determined from the model code is displayed.

3. Peripheral

(3-2) Gate Array Check
Data write → read, and accord check
Error 02: Gate array write/read discord
Data 0x00~0xFF are written to the address 0xF of GA (IC601), then read and checked if they accord.

(3-3) EEPROM Check
Data write → read, and accord check
Error 03: EEPROM write/read discord
Data 0x9249, 0x2942, 0x4294 are written to addresses 0x00~0xFF of EEPROM (IC201), then read and checked. Before writing, the data are saved, then after checking, they are written to restore the contents of EEPROM.

(3-4) NAND Flash Check
Data clear → write → read, and accord check
This check is conducted to the DVP-S725D only.
Error 04: Clear error
05: Write error
06: Read data discord
21: Faulty blocks exceed 10
The data clear, write, read, and check are executed to the block 0 of Flash memory (IC602).
In case of a faulty block, its address is displayed.
An error is output if faulty blocks exceed 10.

4. Servo

(4-2) Servo DSP Check
Data write → read, and accord check
Error 12: Read data discord
Data 0x9249, 0x2942, 0x4294 are written to the address 0x602 of RAM in the Servo DSP (IC701), then read and checked.

(4-3) DSP Driver Test
Test signal data → DSP Driver
Error: Not detected.

Caution: Do not conduct this test with a mechanical deck connected.

The maximum voltage is applied to the Servo Driver IC (IC801, IC802). If mechanical deck is connected, the motor and optics could be damaged. Disconnect mechanical deck following the output message, then enter specified 4- or 5-digit number from the remote commander, and press the ENTER. The test is conducted only when the input data accord. Check the output level, then press the NEXT to finish the test.
This test is skipped if "All" is selected.

Supplement: How to disconnect mechanical deck
Disconnect flat cables connected to the CN002 and CN003 of MB-85 board. Also, disconnect harness from the CN011.

5. Supply

Caution: Do not conduct this check with a mechanical deck connected.
An access is made to the stream supply and servo control IC (IC303) and external RAM (IC304) using check data. If mechanical deck is connected, the motor and optics could be damaged. This check is also executed by the "All" menu item.

Supplement: How to disconnect mechanical deck
Disconnect flat cables connected to the CN002 and CN003 of MB-85 board. Also, disconnect harness from the CN011.

(5-2) ARP Register Check
Data write → read, and accord check
Error 08: ARP register write, and read data discord
Data 0x00 to 0xFF are written to the TMAX register (address 0xC6) in ARP (IC303), then they are read and checked.

(5-3) ARP to RAM Data Bus
Data write → read, and accord check
Error 09: ARP ←→ RAM data bus error
Data 0x0001 to 0x8000 where one bit each is set to 1 are written to the address 0 of RAM (IC304) connected to the ARP (IC303) through the bus, then they are read and checked. In case of discord, written bit pattern and read data are displayed. If data where multiple bits are 1 are read, the bits concerned may touch each other. Further, if data where certain bit is always 1 or 0 regardless of written data, the line could be disconnected or shorted.

(5-4) ARP to RAM Address Bus
Data write → other address read discord check
Error 10: ARP → RAM address bus error
Caution: Address and data display in case of an error is different from the display of other diagnosis (described later).
Before starting the test, all addresses of RAM (IC304) are cleared to 0x0000.
First, 0xA55A is written to the address 0x00000, and the address data are read and checked from addresses 0x00001 to 0x80000 while shifting 1 bit each. Next, the data at that address is cleared, and it is written to the address 0x00001, and read and checked in the same manner. This check is repeated up to the address 0x80000 while shifting the address data by 1 bit each.
If data other than 0 is read at the addresses except written address, an error is given because all addresses were already cleared to 0. In this check, the error display pattern is different from that of other diagnosis; read data, written address, and read address are displayed in this order. However, the message uses same template, and accordingly exchange Address and Data when reading. The following display, for example,

```
    ### Syscon Diagnosis ###




 5-4. ARP to RAM Address Bus
Error 10: ARP - RAM Address B
Address    : 0000A55A
Write Data : 00000000
Read Data  : 00080000
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

shows the data 0xA55A was read from address 0x00080000 though it was written to the address 0x00000000. This implies that these addresses are in the form of shadow. Also, if the read data is not 0xA55A, another error will be present.

(5-5) ARP RAM Check
Data write → read, and accord check
Error 11: ARP RAM read data discord
The program code data stored in ROM are copied to all areas of RAM (IC304) connected to the ARP (IC303) through the bus, then they are read and checked if they accord. If the detail check was selected initially, the data are written to all areas and read, then the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 11, and the test is suspended.

6. AV Decoder

(6-2) 1930 RAM
Data write → read, and accord check
Error 13: AVD RAM read data discord
The program code data stored in ROM (IC206) are copied to all areas of RAM (IC402, IC403) connected to the AVD (IC401) through the bus, then they are read and checked if they accord. Further, the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 13, and the test is suspended.

(6-3) 1930 SP
ROM → AVD RAM → Video OUT
Error: Not detected.
The data including sub picture streams in ROM (IC206) are transferred to the RAM (IC402, IC403) in AVD (IC401), and output as video signals from the AVD (IC401).
They are output from all video terminals (Composite, Y/C, Component) except EURO AV terminal.

7. Video

(7-2) Color Bar
AVD color bar command write → Video OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.
They are output from all video terminals (Composite, Y/C, Component) except EURO AV terminal.

(7-3) Composite Out
EURO-AV Composite video output check
AVD color bar command write → Video (EURO-AV Composite) OUT
Error: Not detected.
With the Component of video output turned off, the color bar signals are output from the EURO-AV terminal.

(7-4) Y/C Out
EURO-AV Y/C video output check
AVD color bar command write → Video (EURO-AV Y/C) OUT
Error: Not detected.
With the Y/C of video output turned on, the color bar signals are output from the EURO-AV terminal.

(7-5) RGB Out
EURO-AV RGB video output check
AVD color bar command write → Video (EURO-AV RGB) OUT
Error: Not detected.
With the RGB of video output turned on, the color bar signals are output from the EURO-AV terminal.

(7-6) Component Out
EURO-AV Component video output check
AVD color bar command write → Video (EURO-AV Component) OUT
Error: Not detected.
With the Component of video output turned on, the color bar signals are output from the EURO-AV terminal.

(7-7) Euro AV Through
Euro-AV2 input check.
Check video and audio signal pass through from Euro-AV2 to Euro-AV1.
Error: Not detected.

8. Audio

(8-2) ARP → 1930

Error 14 : ARP → 1930 video NG

15 : ARP → 1930 audio NG

(8-3) Test Tone

A pink noise signal is output from the AVD (IC401) through optical coaxial digital terminal and analog audio terminal.

Error: Not detected.

All channels → 2ch Left → 2ch Right → Front Left → Front Right → Rear Left → Rear Right → Center → Sub Woofer are checked in this order.

Caution: Sub Woofer is checked only for low-frequency components, and no sound will be heard unless a proper super woofer is connected.

Check Items List

2) Version
(2-2) Revision
(2-3) ROM Check Sum
(2-4) Model Type
(2-5) Region

3) Peripheral
(3-2) Gate Array Check
(3-3) EEPROM Check
(3-4) NAND Flash Check (DVP-S725D)

4) Servo
(4-2) Servo DSP Check
(4-3) DSP Driver Test

5) Supply
(5-2) ARP Register Check
(5-3) ARP to RAM Data Bus
(5-4) ARP to RAM Address Bus
(5-5) ARP RAM Check

6) AV Decoder
(6-2) 1930 RAM
(6-3) 1930 SP

7) Video
(7-2) Color Bar
(7-3) Composite Out
(7-4) Y/C Out
(7-5) RGB Out
(7-6) Component Out

8) Audio
(8-2) ARP → 1930
(8-3) Test Tone

Error Codes List

00: Error not detected
01: RAM write/read data discord
02: Gate array NG
03: EEPROM NG
04: Flash memory clear error
05: Flash memory write error
06: Flash memory read data discord
08: ARP register read data discord
09: ARP ←→ RAM data bus error
10: ARP ←→ RAM address bus error
11: ARP RAM read data discord
12: Servo DSP NG
13: 1930 SDRAM NG
14: ARP → 1930 video NG
15: ARP → 1930 audio NG
16: 1910 UCODE download NG
17: System call error (function not supported)
18: System call error (parameter error)
19: System call error (illegal ID number)
20: System call error (time out)
21: NAND Flash faulty blocks exceed 10
90: Error occurred
91: User verification NG
92: Diagnosis cancelled

6-4. DRIVE AUTO ADJUSTMENT

On the Test Mode Menu screen, press [1] key on the remote commander, and the drive auto adjustment menu will be displayed.

```
   ## Drive Auto Adjustment ##

         Adjustment Menu

0. ALL
1. DVD-SL
2. CD
3. DVD-DL
4. SACD



                  Exit: RETURN
```

Normally, [0] is selected to adjust DVD (single layer), CD, DVD (dual layer), and SACD in this order. But, individual items can be adjusted for the case where adjustment is suspended due to an error. In this mode, the adjustment can be made easily through the operation following the message displayed on the screen.
The disc used for adjustment must be the one specified for adjustment. However, for SACD disc, use the player with initial data if the disc is not available.

0. ALL

Select [0] and press [ENTER] key, and the servo set data in EEPROM will be initialized. Then, 1. DVD-SL disc, 2. CD disc, 3. DVD-DL disc, and 4. SACD disc are adjusted in this order. Each time one disc was adjusted, it is ejected. Replace it with the specified disc following the message. Though the message to confirm whether discs other than SACD disc are adjusted is not displayed, you can finish the adjustment if pressing the [STOP] button. During adjustment of each disc, the measurement for disc type judgment is made. As automatic adjustment does not judge the disc type unlike conventional models, take care not to insert wrong type discs. Also, do not give a shock during adjustment.

1. DVD-SL (single layer)

Select [1], insert DVD single layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Single Layer Disc Adjustment Steps

1. SLED TILT Reset
2. Disc Check Memory SL
3. Wait 300 msec
4. Set Disc Type SL
5. LD ON
6. Spdl Start
7. Wait 1 sec
8. Focus Servo ON 0
9. Auto Track Offset Adjust
10. CLVA ON
11. Wait 500 msec
12. Tracking ON
13. Wait 1 sec
14. Sled ON
15. Check CLV Lock
16. Auto LFO Adjust
17. Auto Focus Offset Adjust
18. Auto Tilt Position Adjust
19. Auto Focus Gain Adjust
20. Auto Focus Offset Adjust
21. EQ Boost Adjust
22. Auto LFO Adjust
23. Auto Track Gain Adjust
    Search Check
24. 32Tj Fwd
25. 32Tj Rev
26. 500Tj Fwd
27. 500Tj Rev

28. All Servo Stop
29. Eep Copy Loop Filter Offset

2. CD

Select [2], insert CD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

CD Adjustment Steps

1. Sled Tilt Rest
2. Disc Check Memory CD
3. Wait 500 msec
4. Set Disc Type CD
5. LD ON
6. Spdl Start
7. Wait 500 msec
8. Focus Servo ON 0
9. Auto Track Offset Adjust

10. CLVA ON
11. Wait 500 msec
12. Tracking ON
13. (TC Display Start)
14. Wait 1 sec
15. Jitter Display Start
16. Sled ON
17. Check CLV ON
18. Auto LFO Adjust
19. Auto Focus Offset Adjust
20.
21. Auto Focus Gain Adjust
22. Auto Focus Offset Adjust
23. Eq Boost Adjust
24. Auto LFO Adjust
25. Auto Track Gain Adjust
    Search Check
26. 32Tj Fwd
27. 32Tj Rev
28. 500Tj Fwd
29. 500Tj Rev

30. All Servo Stop

3. DVD-DL (dual layer)

Select [3], insert DVD dual layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Dual Layer Disc Adjustment Steps

1. Sled Tilt Reset
2. Disc Check Memory DL
3. Wait 500 msec
4. Set Disc Type DL
5. LD ON
6. Spdl Start
7. Wait 1 sec
    Layer 1 Adjust
8. Focus Servo ON 1
9. Auto Track Offset Adjust

10. Clva ON
11. Wait 500 msec
12. Tracking ON
13. Wait 500 msec
14. Sled ON
15. Check CLV Lock
16. Auto Loop Filter Offset Auto Focus Adjust
17.
18. Auto Focus Gain Adjust
19. Auto Focus Offset Adjust
20. Eq Boost Adjust
21. Auto Loop Filter Offset
22. Auto Track Gain Adjust
    Search Check
23. 32Tj Fwd
24. 32Tj Rev
25. 500Tj Fwd
26. 500Tj Rev
    Layer 0 Adjust
27. Fj (L1 → L0)
28. Auto Track Offset Adjust L0

29. Clva ON
30. Wait 500 msec
31. Tracking ON
32. Wait 500 msec
33. Sled ON
34. Check CLV Lock
35. Auto Focus Filter Offset
36. Auto Focus Adjust
37.
38. Auto Focus Gain Adjust
39. Auto Focus Offset Adjust
40. Eq Boost Adjust
41. Auto Loop Filter Offset
42. Auto Track Gain Adjust
    Search Check
43. 32Tj Fwd
44. 32Tj Rev
45. 500Tj fwd
46. 500Tj Rev
    Layer Jump Check
47. Lj (L0 → L1)
48. Lj (L1 → L0)

49. All Servo Stop

4. SACD

Select [4], insert SACD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. However, if SACD disc is not available, use the player with initial data, skipping the SACD adjustment. In this case, you can finish the adjustment if pressing the [STOP] button.

SACD Adjustment Steps

1. Sled Tilt Reset
2. Set Disc Type CD
3. LD ON
4. Spdl Start
5. Wait 500 msec
6. Focus Servo ON 0
7. Auto track Offset Adjust
8.
9. CLVA ON
10. Wait 500 msec
11. Tracking ON
12. Wait 1 sec
13. Sled ON
14. Check CLV ON
15. Auto Focus Offset Adjust
17.
18. Auto Focus Gain Adjust
19. Auto Focus Offset Adjust
20. Eq Boost Adjust
21. Auto LFO Adjust
22. Auto Track Gain Adjust

23. 32Tj Fwd
24. 32Tj Rev
25. 500Tj Fwd
26. 500Tj Rev

27. All Servo Stop

6-5. DRIVE MANUAL OPERATION

On the Test Mode Menu screen, select [2], and the manual operation menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```
  ## Drive Manual Operation ##

         Operation Menu
1. Disc type
2. Servo Control
3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment
6. Memory Check

0. Disc Check Memory

                Exit: Return
```

In using the manual operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

1. Set correctly the disc type to be used on the Disc Type screen.
   The disc type must be set after a disc was loaded.
   The set disc type is cleared when the tray is opened.
2. After power ON, if the Drive Manual Operation was selected, first perform "Reset SLED TILT" by opening 1. Disc Type screen.
3. In case of an alarm, immediately press the [STOP] button to stop the servo operation, and turn the power OFF.

Basic operation (controllable from front panel or remote commander)

[POWER]	Power OFF
[STOP]	Servo stop
[OPEN/CLOSE]	Stop+Eject/Loading
[RETURN]	Return to Operation Menu or Test Mode Menu
[NEXT], [PREV]	Transition between sub modes of menu
[1] to [9], [0]	Selection of menu items
Cursor UP/DOWN	Increase/Decrease in manually adjusted value

0. Disc Check Memory

```
            Disc Check



1. SL Disc Check
2. CD Disc Check
3. DL Disc Check




0. Reset SLED TILT
```

On this screen, the mirror time is measured to judge the disc and it is written to the EEPROM. First load DVD SL disc and press [1], next load CD disc and press [2], and finally load DVD DL disc and press [3].
The adjustment must be executed more than once after default data were written. External vibration or shock to the player must not be given. Reference value for DVD is from 10 to 20, and for CD, from 28 to 4F.
Check that the value of CD is larger than that of DVD.
When those values are beyond a range perform this adjustment again.
From this screen, you can go to another mode by pressing [NEXT] or [PREV] key, but you cannot enter this mode from another mode. You can enter this mode from the Operation Menu screen only.

1. Disc Type

```
             Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. DVD SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
                        EMG. 00
```

On this screen, select the disc type. To select the disc type, press the number of the loaded disc. The selected disc type is displayed at the bottom. Selecting [1] automatically selects and displays the disc type. In case of wrong display, retry "Disc Check Memory". Also, opening the tray causes the set disc type to be cleared. In this case, set the disc type again after loading.
In performing manual operation, the disc type must be set.
Once the disc type has been selected, the sector address or time code display field will appear as shown below. These values are displayed when PLL is locked.

```
             Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. DVD SL   8 cm     ___
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
        SA.      SI.    EMG. 00
DVD SL 12 cm
```

Display when DVD SL 12cm disc was selected

```
             Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. DVD SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
         TC.——:——:—— EMG. 00
CD   12 cm
```

Display when CD 12cm disc was selected

[0] Reset SLED TILT	Reset the Sled and Tilt to initial position.
[1] Disk Type Check	Judge automatically the loaded disc. As the judged result is displayed at the bottom of screen, make sure that it is correct. If Disc Check Memory menu has not been executed after EEPROM default setting, the disc type cannot be judged. In this case, return to the initial menu and make a check for three types of discs (SL, DL, CD).
[2] to [9]	Select the loaded disc. The adjusted value is written to the address of selected disc. No further entry is necessary if [1] was selected.

2. Servo Control

```
         Servo Control
1. LD        Off R.Sled FWD
2. SP        Off L.Sled REV
3. Focus     Off
4. TRK.      Off
5. Sled      Off
6. CLVA      Off
7. FCS. Srch Off


0. Reset SLED TILT
        SA.─────SI.── EMG. 00
DVD SL 12 cm
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.
The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

0	Reset SLED TILT	Reset the Sled and Tilt to initial position.
1	LD	Turn ON/OFF the laser.
2	SP	Turn ON/OFF the spindle.
3	Focus	Search the focus and turn on the focus.
4	TRK	Turn ON/OFF the tracking servo.
5	Sled	Turn ON/OFF the sled servo.
6	CLVA	Turn ON/OFF normal servo of spindle servo.
7	FCS. Srch	Apply same voltage as that of focus search to the focus drive to check the focus drive system.
→	Sled FWD	Move the sled outward. Perform this operation with the tracking servo turned off.
←	Sled REV	Move the sled inward. Perform this operation with the tracking servo turned off.
↑	Tilt UP	Move the tilt upward.
↓	Tilt DOWN	Move the tilt downward.

The following menus are normally not used.

3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment

The persons who do not know well about these menus should not use them.

6. Memory Check

```
EEPROM DATA
                CD       – DVD –
ID No. 00      SACD     SL  L0  L1
Focus Gain     xx xx    xx  xx  xx
TRK. Gain      xx xx    xx  xx  xx
Focus Offset   xx xx    xx  xx  xx
TRK. Offset    xx xx    xx  xx  xx
L. F. Offset   xx xx    xx  xx  xx
EQ Boost       xx xx    xx  xx  xx
Jitter         xx xx    xx  xx  xx
Mirror Time    xx xx    xx  xx  xx
_
CLEAR: Default Set
```

This screen displays current servo adjusted data stored in the EEPROM. Though adjusted data can be initialized with the CLEAR key, they cannot be restored after initialization.
So, before clearing, make a note of the adjusted data.
For reference, the drive has been designed so that the gain center value is 20 and offset value is 80. Other values will be in a range of 10 to 80. If extreme value such as 00 or FF is set, adjustment will be faulty. In such a case, check for disc scratch or cable disconnection, then perform adjustment again.

6-6. MECHA AGING

```
       ### Mecha Aging ###



Press OPEN key




Abort: STOP key
```

On the Test Mode Menu screen, selecting 3 executes the aging of mechanism. First, open the tray and load a disc. Press the PLAY key, and the aging will start. When the tray is closed, the disc type and size are judged and displayed. During aging, the repeat cycle is displayed. Aging can be aborted at any time by pressing the STOP key. After the operation has stopped, unload the disc and press again the STOP key or the RETURN key to return to the Test Mode Menu.

6-7. EMERGENCY HISTORY

```
      ### MEG. History ###

Laser Hours     CD   xxxxxxxh
                DVD  xxxxxxxh

1. 00 00 00 00  00 00 00 00
   00 00 00 00  00 00 00 00

2. 00 00 00 00  00 00 00 00
   00 00 00 00  00 00 00 00

Select: 1 – 9   Scroll: UP/DOWN
(1: Last EMG.)  Exit: Return
```

On the Test Mode Menu screen, selecting 4 displays the information such as servo emergency history. The history information from last 1 up to 10 can be scrolled with ↑ key or ↓ key. Also, specific information can be displayed by directly entering that number with ten keys.

The upper two lines display the laser ON total hours. Data below minutes are omitted.

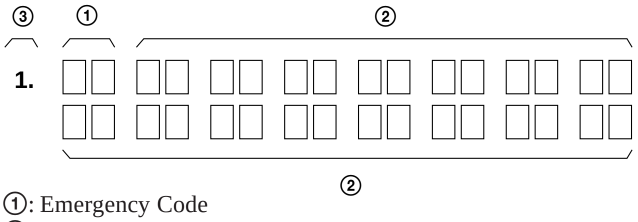
Clearing History Information

Clearing laser hours
◎ Press DISPLAY and CLEAR keys in this order.
Both CD and DVD data are cleared.

Clearing emergency history
◎ Press TITLE and CLEAR keys in this order.

Initializing set up data
◎ Press DVD and CLEAR keys in this order.
The data have been initialized when “Set Up Initialized” message is displayed. The EMG. History screen will be restored soon.

How to see Emergency History



①: Emergency Code
②: Don't Care
These codes are used for verification of software designing.
③: Historical order 1 to 9

Emergency Codes List

10: Communication to IC001 (TK-54 board) failed.
11: Each servo for focus, tracking, and spindle is unlocked.
12: Communication to EEPROM, IC201 (MB-85 board) failed.
13: Writing of hours meter data to EEPROM, IC201 (MB-85 board) failed.
14: Communication to Servo DSP IC701 (MB-85 board) failed, or Servo DSP is faulty.
20: Initialization of tilt servo and sled servo failed. They are not placed in the initial position.
21: Tilt servo operation error
22: Syscon made a request to move the tilt servo to wrong position.
23: Sled servo operation error
24: Syscon made a request to move the sled servo to wrong position.
30: Tracking balance adjustment error
31: Tracking gain adjustment error
32: Focus balance adjustment error
33: Focus bias adjustment error
34: Focus gain adjustment error
35: Tilt servo adjustment error
36: RF equalizer adjustment error
37: RF group delay adjustment error
38: Jitter value after adaptive servo operation is too large.
40: Focus servo does not operate.
41: With a dual layer (DL) disc, focus jump failed.50: CLV (spindle) servo does not operate.
51: Spindle does not stop.
60: With a DVD disc, Syscon made a request to seek nonexistent address.
61: With a CD disc, Syscon made a request to seek nonexistent address.
62: With a CD disc, Syscon made a request to seek nonexistent track No. and index No.
63: With a DVD disc, seeking of target address failed.
64: With a CD disc, seeking of target address failed.
65: With a CD disc, seeking of target index failed.
70: With a DVD disc, physical information data could not be read.
71: With a CD disc, TOC data could not be read.
80: Disc type judgment failed.
81: As disc type judgment failed, retry was repeated.
82: As disc type judgment failed, a measurement error occurred.
83: Disc type could not be judged within the specified time.
84: Illegal command code was received from Syscon.
85: Illegal command was received from Syscon.

6-8. VERSION INFORMATION

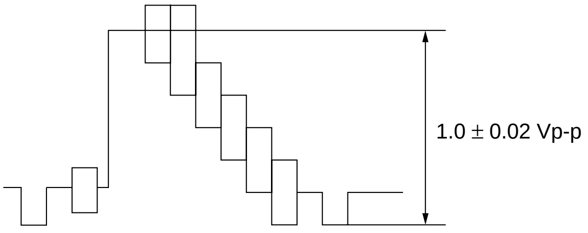
```
   ## Version Information ##

IF con.    Ver. x. xxx (xxxx)
           Group    00

SYScon.    Ver. x. xxx (xxxx)
           Model    xx
           Region   0x
           SW1      ??
           SW2      ??

Exit: RETURN
```

On the Test Mode Menu screen, selecting [5] displays the ROM version and region code.
The parenthesized hexadecimal number in version field is checksum value of ROM.

6-9. VIDEO LEVEL ADJUSTMENT

On the Test Mode Menu screen, selecting [6] displays color bars for video level adjustment. During display of color bars, OSD disappears but the menu screen will be restored if pressing any key.

Measurement point : LINE OUT VIDEO
(75 Ω terminating resistance)
Measuring instrument : Oscilloscope
Adjustment device : RV401 on MB-85 board
Specified value : 1.0 ± 0.02 Vp-p



6-10. IF CON SELF DIAGNOSTIC FUNCTION

1. FRONT BOARD TEST MODE

The front board test mode is the IF CON self diagnostic mode. The IF CON can diagnose the functions of the front panel boards that the IF CON controls. Normally, the IF CON makes a serial communication with the SYSTEM CONTROL and operates following thecommands from the SYSTEM CONTROL, but in the Test mode, the IF CON operates independently from the SYSTEM CONTROL.

In the Test mode, the following functions can be checked.

1. Button function
2. Remocon receiving function
3. SYSTEM CONTROL-IF CON serial communication
4. Direct search dial function
5. Click shuttle function
6. Fluorescent display tube lighting check
   Grid check
   Anode check
7. LED control function

In the Test mode, the set operates same as usual, except voltage monitoring, communication monitoring, display of fluorescent display tube, and LED control.

1. The routine that monitors +3.3 V (PCONT) of MB-85 board is not provided.
2. The monitoring timer for serial communication with the SYSTEM CONTROL is not provided. The set is not placed in the Standby mode, even if the communication with SYSTEM CONTROL is normal.
3. Display of fluorescent display tube (normally, display is made following the commands from SYSTEM CONTROL)
4. LED control (normally, control is made following the commands from SYSTEM CONTROL)

2. HOW TO ENTER THE TEST MODE

The set must be placed in the Standby mode (red LED lights up). In the Standby mode, press the [SET UP] key on the Remocon while pressing simultaneously the [RETRUN] button and [STOP] button on the set, so that the set enters the Test mode.

When the Test mode becomes active, the automatic display sequence of the FL display tube starts.

1. LEDs and FL display tube all light up for about 5 seconds.
2. Then, the prototypical model name is displayed.
   (This model name is a typical name of the series. As the button arrangement varies depending on the model, make sure the difference.)

Display	Model
DPX-1230	DVP-S525D
DPX-1226	DVP-S725D

3. Last updating date of the program is displayed.
   Example: 981211
4. Following the “GRID TEST” display, odd grids and even grids are blinking alternately (3 times).
5. Following the “ANODE TEST” display, even anodes and odd anodes are blinking alternately (3 times). For the FL display tube type A, even and odd numeric parts of music calendar are blinking alternately (3 times).
6. All light-up mode restores.

Steps 1 through 6 are repeated. (Refer to “FLD Auto Test Operation” on page 6-12)

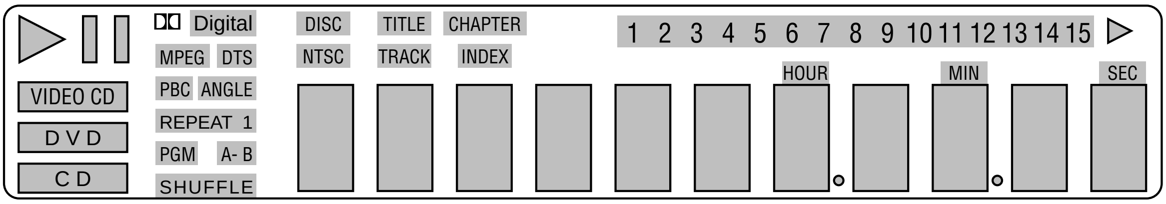
3. HOW TO EXIT FROM THE TEST MODE

Press the [POWER] buttons on the set and Remocon, and the FL display tube turns off and the Standby mode is restored where only the red POWER LED lights up. This is the case where the SYSTEM CONTROL and IF CON are communicating normally. To forcibly activate the Standby mode, press the [POWER] button together with the [STOP] button.

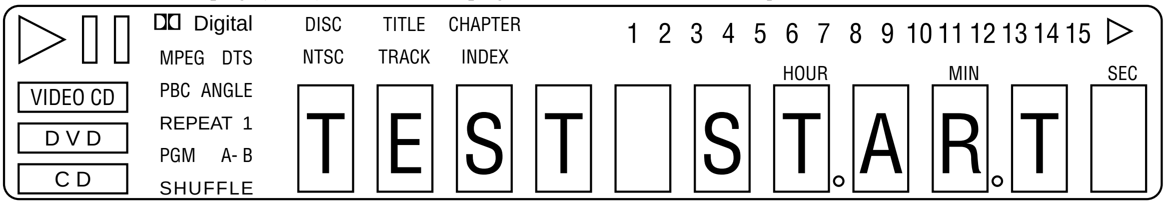
FLD Auto Test Operation

The auto test starts when the STOP and RETURN buttons on the set and the SET UP key on the Remocon are pressed at the power off.

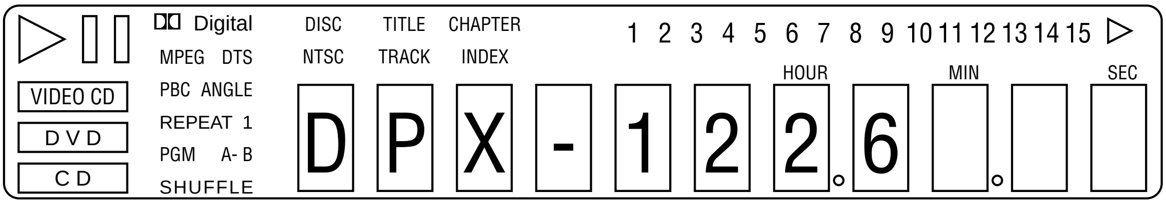
① FLD all light up (5 sec)



② TEST START display (2 sec) This is not displayed after second and subsequent tests.

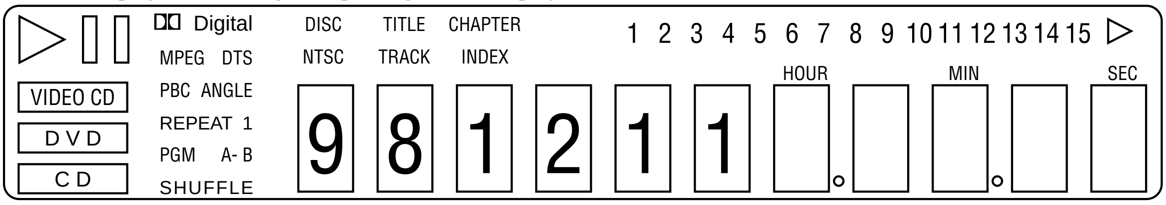


③ Model display (2 sec)

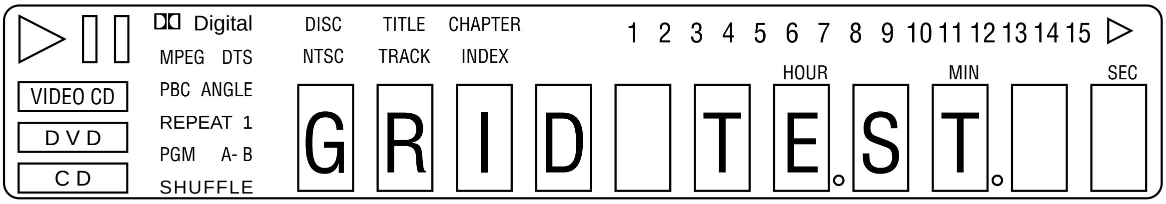


Note: Prototypical model name of the series is displayed.

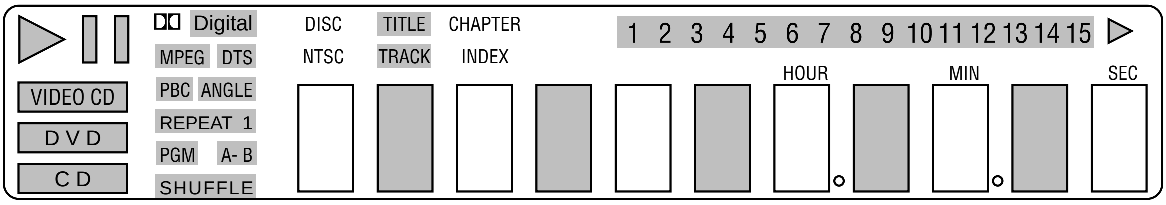
④ Date display (2 sec) Program updating date is displayed.



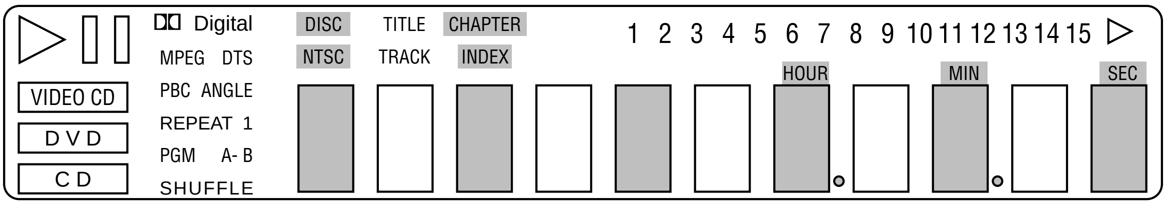
⑤ GRID TEST start display (1 sec)



⑥ FLD odd grids light up (0.7 sec)

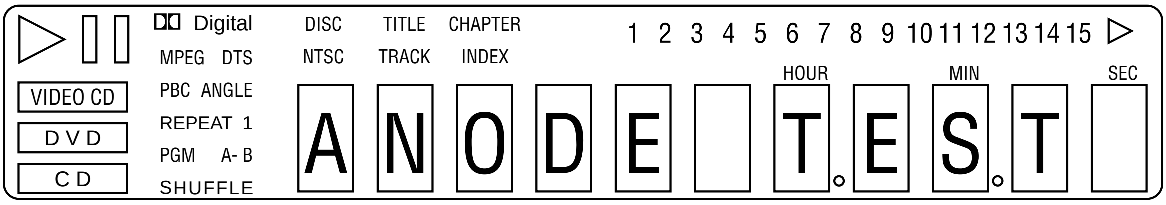


⑦ FLD even grids light up (0.7 sec)

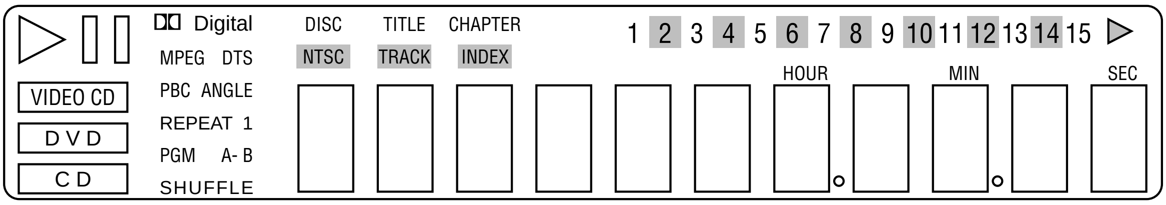


Note: Displays of ⑥ and ⑦ are repeated three times.

⑧ FLD ANODE TEST display No.1 (1 sec)

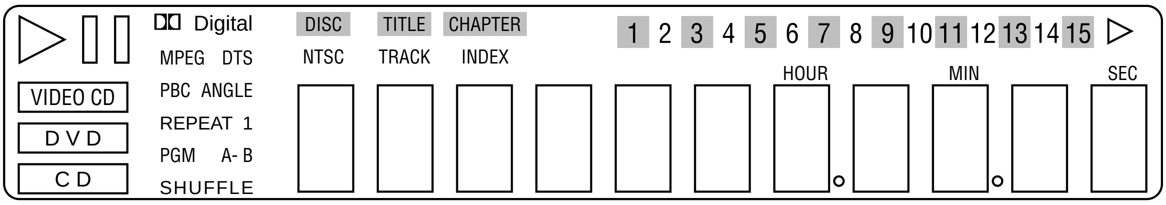


⑨ FLD even anodes light up (0.7 sec)



Note: Also, even anodes of alphanumeric section light up.

⑩ FLD odd anodes light up (0.7 sec)



Note: Also, odd anodes of alphanumeric section light up.
Note: Displays of ⑨ and ⑩ are repeated three times.

Hence, the operations of ① through ⑩ arerepeated.
However, ② is not displayed after the second and subsequent tests.

4. DESCRIPTION OF IF CON FUNCTION CHECK MODE

1. Button Function

In the Test mode, press any button (except POWER button) on the set. This operation terminates the automatic display test mode of the FL display tube. During the time that the button is pressed, the function name of the pressed button is displayed on the FL display tube, and “NOTHING” is displayed if releasing the button. For the button names displayed, refer to the following table.
For the illuminated button (LED built in), it turns on and off alternately each time it is pressed. For the multi-channel LED (blue LED), it blinks when the “RETURN” button is pressed because its dedicated button is not provided.

DVP-S525D:

	Input Voltage [V]	IC201: Pin No. (Signal)		
		Pin ⑥ (AN0)	Pin ⑤ (AN1)	Pin ④ (AN2)
1	0	STOP	POWER	REPEAT
2	0.65	PAUSE	OPEN/CLOSE	CLEAR
3	1.24	←	PLAY	PROGRAM
4	1.88	↓	TITLE	SHUFFLE
5	2.41	ENTER	DVD MENU	SURROUND
6	2.92	↑	RETURN	
7	3.45	→	PREVIOUS	
8	3.94	JOG	NEXT	

DVP-S725D:

	Input Voltage [V]	IC201: Pin No. (Signal)		
		Pin ⑥ (AN0)	Pin ⑤ (AN1)	Pin ④ (AN2)
1	0	STOP	POWER	REPEAT
2	0.65	PAUSE	OPEN/CLOSE	CLEAR
3	1.24	←	PLAY	PROGRAM
4	1.88	↓	TITLE	SHUFFLE
5	2.41	ENTER	DVD MENU	SURROUND
6	2.92	↑	RETURN	
7	3.45	→	SEARCH-REV	
8	3.94	JOG	SEARCH-FWD	
9	4.52	ACS ENTER		

The direction buttons are used to enter special modes.

- ↑ : FL display tube grid check
- ↓ : LED check
- ← : Direct search dial check
- → : FL display tube anode check

The buttons are all checked with the voltage at the A/D port. The reference voltage of A/D port is ever 5V. The voltage is calculated at 10bit accuracy and evaluated whether same voltage can be obtained in two-time operations to eliminate the chattering.
For the button check by the IF CON, a dead zone is provided, and if voltage in the dead zone is entered, “IGNORE” is displayed.

2. Remocon Receiving Function

Upon reception of a code from the Remocon when “NOTHING” is displayed, the function name of Remocon code is displayed on the FL display tube. The codes that can be received are DVD category codes only. The “DISPLAY” on Remocon functions to change over the function name display and the code display. In the code display mode, “REM NO xx” is displayed. A xx part is the received code in Hex notation. It is FF when a Remocon code is not received.

3. SYSTEM CONTROL-IF CON Serial Communication

Normally, two-way communication at 24ms interval is made between IF CON and SYSTEM CONTROL. Whether this communication is carried out normally can be checked easily. When “NOTHING” is displayed, OFF display of “VIDEO CD”, “DVD”, and “CD” characters on the left side of FL display tube indicates that a serial communication with the SYSTEM CONTROL is carried out normally. ON display of these characters indicates that the communication with the SYSTEM CONTROL is not made.
However, the communication is not made for several seconds after the Test mode became active (until MB-85 board is initialized), and these characters may turn on. This status is normal.

4. Direct Search Dial

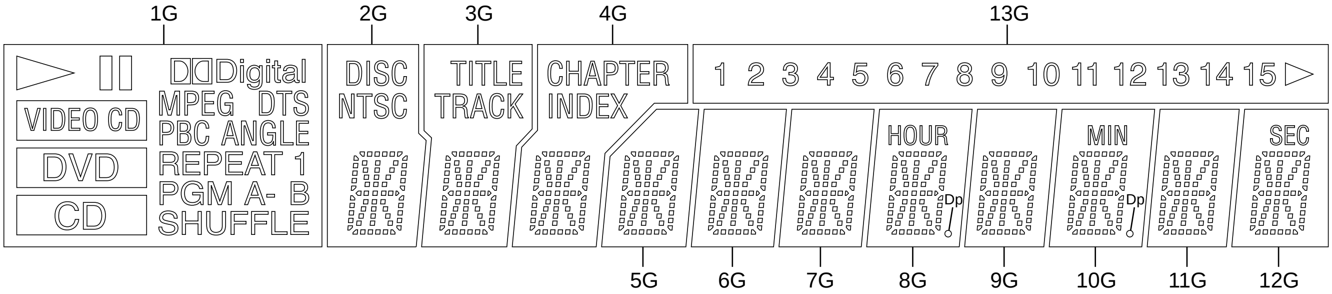
The grid X part displays images that rotate. At the same time, the numbers on music calendar shift toward the direction in which the direct search dial was rotated.
(Though this is displayed on the models which do not have the dial, it does not function because of no dial.)

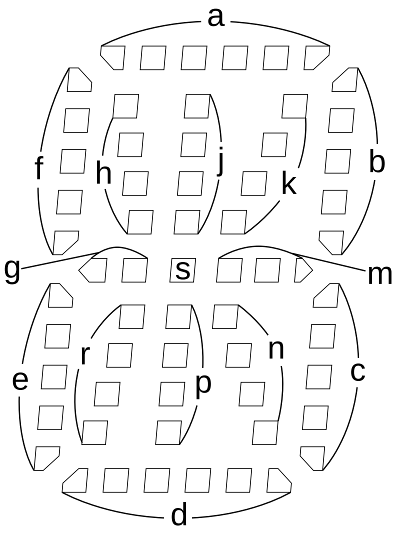
5. Click Shuttle

Whether the IF CON can judge the rotation of click shuttle is checked.In the following grid check and anode check, if the part that lights up is shifted as the click shuttle rotates, the function is normal.

6. Display of Fluorescent Display Tube

Use this mode when checking the FL display tube precisely, though the FL display tube is roughly checked in the auto display mode. Press simultaneously the STOP and PLAY buttons on the set, so that the FL display tube can all be lighted up.





(2G~12G)

ANODE CONNECTION

(Grid)

(Anode)

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G
P1	ANGLE	a	a	a	a	a	a	a	a	a	a	a	1
P2	PBC	h	h	h	h	h	h	h	h	h	h	h	2
P3	1	j	j	j	j	j	j	j	j	j	j	j	3
P4	REPEAT	k	k	k	k	k	k	k	k	k	k	k	4
P5	PGM	b	b	b	b	b	b	b	b	b	b	b	5
P6	A-	f	f	f	f	f	f	f	f	f	f	f	6
P7	B	m	m	m	m	m	m	m	m	m	m	m	7
P8	SHUFFLE	s	s	s	s	s	s	s	s	s	s	s	8
P9	DTS	g	g	g	g	g	g	g	g	g	g	g	9
P10	MPEG	c	c	c	c	c	c	c	c	c	c	c	10
P11	DD Digital	e	e	e	e	e	e	e	e	e	e	e	11
P12	CD	n	n	n	n	n	n	n	n	n	n	n	12
P13	DVD	p	p	p	p	p	p	p	p	p	p	p	13
P14	VIDEO CD	r	r	r	r	r	r	r	r	r	r	r	14
P15	II	d	d	d	d	d	d	d	d	d	d	d	15
P16	▷	NTSC	TRACK	CHAPTER	-	-	-	Dp	-	Dp	-	-	▷
P17	-	DISC	TITLE	INDEX	-	-	-	HOUR	-	MIN	-	SEC	-

7. Grid Check (↑ button: Grid Check Mode)

In this mode, arbitrary one grid of FL display tube lights up. (The anodes of the grid concerned all light up.) To shift the grids, use the click shuttle on the set. For the models not having the click shuttle, the DVD Remocon having the click shuttle can be used instead.

Staring from G1, rotate the click shuttle clockwise, and the grids shift such as G2, G3 .... G16. The grids return to G1 following G16.

During this mode, any one grid always lights up.

8. Anode Check (→ button: Anode Check Mode)

In this mode, arbitrary one anode of FL display tube lights up. (All grids of the anode concerned all light up.)
Staring from P1, rotate the click shuttle clockwise, and the anodes shift such as P2, P3 .... The anodes return to P1 following the last anode. During this mode, one anode of all grids always lights up. For the models not having the click shuttle, the DVD Remocon having the click shuttle can be used instead.

9. LED Control

In this mode, LEDs, one by one, light up by pressing the ↓ button. Rotating the click shuttle causes the LED that lights up to be shifted. For the illuminated buttons, the built-in LEDs turn on and off each time the buttons are pressed, independently from this mode.

5. TROUBLESHOOTING

1. Test Mode is not activated

With the set assembled in the front panel, the Test mode does not become active if any button was pressed by any reason.Under this condition, the power is not turned on even in the normal status. (The set is kept in Standby status = Red LED is kept on) Not only the buttons are inactive, but also a signal from Remocon is not accepted. To check this condition, with the self check port (pin ⑹⑼ of IF CON) kept in “Low” status, supply the AC power, so that the Test mode is forcibly activated. On the board, short the lands where SELF is printed. The IF CON checks the self check port only after the power on reset (only when AC is supplied; not in Standby status). If any button was pressed, the button name should be displayed on the FL display tube. Though no button is pressed this time, display of other than NOTHING implies that the button was pressed. However, the set will go in Standby status immediately unless the FFC (pin ⑰) connected to the MB-85 board is disconnected in advance.

2. Power is not turned on

① Red (STANDBY) LED does not light up when AC was supplied. The power (EVER 5V) is not supplied.
X201 is oscillating.
Loose connection of the connector between FL board and FR board.

② Red (STANDBY) LED is kept on though POWER button was pressed. Any button is kept pressed.
PCHECK (IF CON pin ⑺⑺) is over 0.1V.

③ Green LED lights up when POWER button was pressed, but red LED lights up again after several seconds. PCHECK (IF CON pin ⑺⑺) is abnormal. (Slow rise time from 0.1V to 1.5V. Voltage must be less than 1.5V)
SYSTEM CONTROL does not operate normally.

SECTION 7
ELECTRICAL ADJUSTMENT

In making adjustment, refer to 7-3. Adjustment Related Parts Arrangement.

Note: During diagnostic check, the characters and color bars can be seen only with the NTSC monitor. Therefore, for diagnostic check, use the monitor that supports both NTSC and PAL modes.
Use the reference disc for PAL for check, and use the reference disc for NTSC for adjustment.

This section describes procedures and instructions necessary for adjusting electrical circuits in this set.

Instruments required:
1) Color monitor TV
2) Oscilloscope 1 or 2 phenomena, band width over 100 MHz, with delay mode
3) Frequency counter (over 8 digits)
4) Digital voltmeter
5) Standard commander (RMT-D108P/D111P)
6) DVD reference disc
HLX-501 (J-6090-071-A) (dual layer) (NTSC)
HLX-503 (J-6090-069-A) (single layer) (NTSC)
HLX-504 (J-6090-088-A) (single layer) (NTSC)
HLX-505 (J-6090-089-A) (dual layer) (NTSC)
HLX-506 (J-6090-077-A) (single layer) (PAL)
HLX-507 (J-6090-078-A)(dual layer) (PAL)
7) SACD reference disc
HLXA-509 (J-6090-090-A)

7-1. POWER SUPPLY ADJUSTMENT

1. HS-030SH Board

Mode	E-E
Instrument	Digital voltmeter
+5 V Check	
Test point	CN202 pin ⑤
Specification	5.0 ± 0.2 Vdc
+3.3 V Check	
Test point	CN202 pin ⑦
Specification	3.3 ± 0.2 Vdc
EVER+5 V Check	
Test point	CN203 pin ②
Specification	5.0 ± 0.2 Vdc
P_CONT Check	
Test point	CN203 pin ①
Specification	4V – 5 Vdc
A +12 V Check	
Test point	CN202 pin ①
Specification	$9.5^{+1.5}_{-0.5}$ Vdc
–12 V Check	
Test point	CN203 pin ⑤
Specification	–12.0 ± 1.0 Vdc
M +12 V Check	
Test point	CN202 pin ②
Specification	12.0 ± 1.0 Vdc

Checking method:
1) Confirm that each voltage satisfies the specification.

7-2. ADJUSTMENT OF VIDEO SYSTEM

1. Video Level Adjustment (MB-85 BOARD)

<Purpose>

This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	LINE OUT (VIDEO) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV401
Specification	1.0 ± 0.02 Vp-p

Adjusting method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Adjust the RV401 to attain 1.0 ± 0.02 Vp-p.

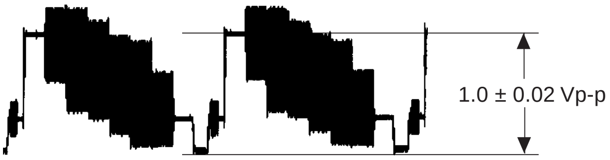


Figure 7-1

2. S-terminal Output Check (MB-85 BOARD)

<Purpose>

Check S-terminal video output. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with a S-terminal cable.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.0 ± 0.1 Vp-p

Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-Y level is 1.0 ± 0.1 Vp-p.

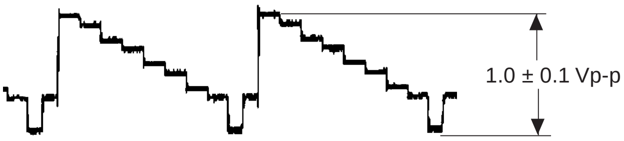


Figure 7-2

3. Checking Component Video Output B-Y (MB-85 BOARD) (DVP-S725D)

<Purpose>

This checks component video output B-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (B-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	700 ± 70 mVp-p

Checking method:

1) Confirm that the B-Y level is 700 ± 70 mVp-p.

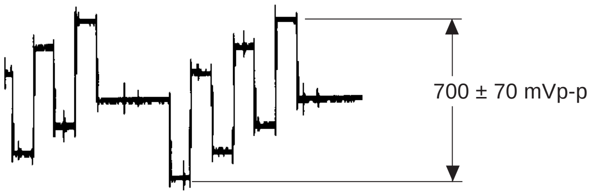


Figure 7-3

4. Checking Component Video Output R-Y (MB-85 BOARD) (DVP-S725D)

<Purpose>

This checks component video output R-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (R-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	700 ± 70 mVp-p

Checking method:

1) Confirm that the R-Y level is 700 ± 70 mVp-p.

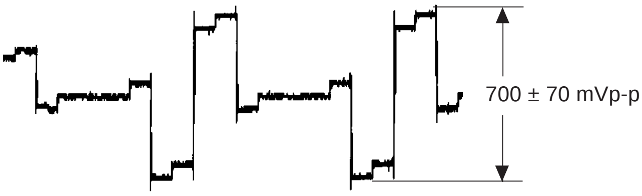


Figure 7-4

5. Checking Component Video Output Y (MB-85 BOARD) (DVP-S725D)

<Purpose>

This checks component video output Y. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.0 ± 0.1 Vp-p

Checking method:

1) Confirm that the Y level is 1.0 ± 0.1 Vp-p.

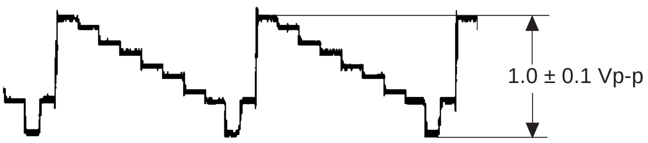


Figure 7-5

6. Checking RGB Output R (MB-85 BOARD)

<Purpose>

This checks RGB output R. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with an EURO AV connecting cord.

Mode	In test mode, Push [0] for Syscon Diagnosis and push [7] for Video and push [5] for RGB out
Signal	Color bars
Test point	EURO AV 1 (RGB)-TV connector pin ⑮ (75 Ω terminated)
Instrument	Oscilloscope
Specification	700 ± 70 mVp-p

Checking method:

1) Confirm that the R level is 700 ± 70 mVp-p.

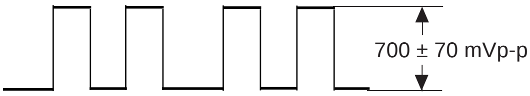


Figure 7-6

7. Checking RGB Output G (MB-85 BOARD)

<Purpose>

This checks RGB output G. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with an EURO AV connecting cord.

Mode	In test mode, Push [0] for Syscon Diagnosis and push [7] for Video and push [5] for RGB out
Signal	Color bars
Test point	EURO AV 1 (RGB)-TV connector pin ⑪ (75 Ω terminated)
Instrument	Oscilloscope
Specification	700 ± 70 mVp-p

Checking method:

1) Confirm that the G level is 700 ± 70 mVp-p.

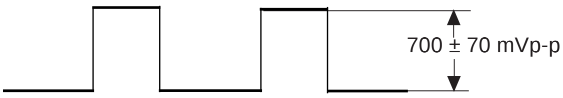


Figure 7-7

8. Checking RGB Output B (MB-85 BOARD)

<Purpose>

This checks RGB output B. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with an EURO AV connecting cord.

Mode	In test mode, Push [0] for Syscon Diagnosis and push [7] for Video and push [5] for RGB out
Signal	Color bars
Test point	EURO AV 1 (RGB)-TV connector pin ⑦ (75 Ω terminated)
Instrument	Oscilloscope
Specification	700 ± 70 mVp-p

Checking method:

1) Confirm that the B level is 700 ± 70 mVp-p.

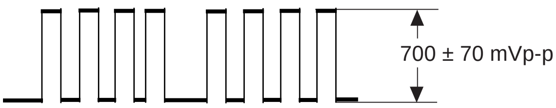


Figure 7-8

9. Checking S Video Output S-C (MB-85 BOARD)

<Purpose>

This checks whether the S-C satisfies the NTSC Standard. If it is not correct, the colors will be too dark or light.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-C) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	286 ± 50 mVp-p (NTSC) 300 ± 100 mVp-p (PAL)

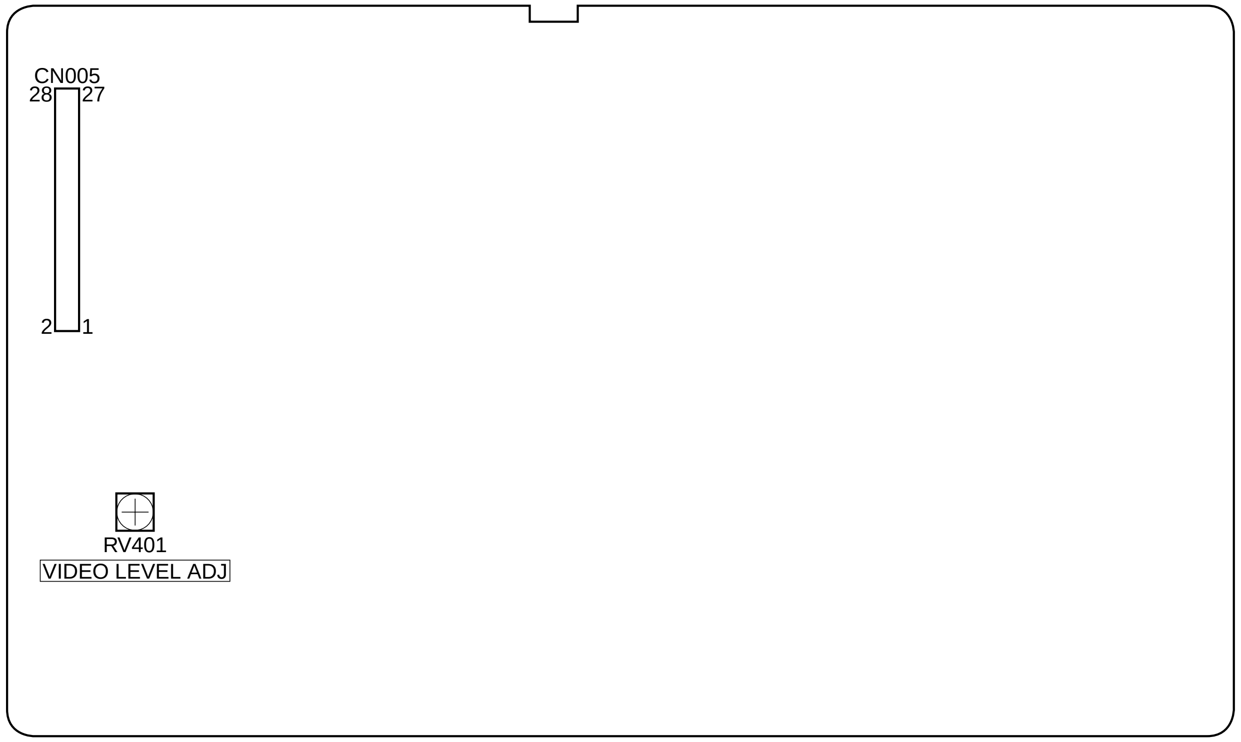
Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-C burst is 300 ± 100 mVp-p.

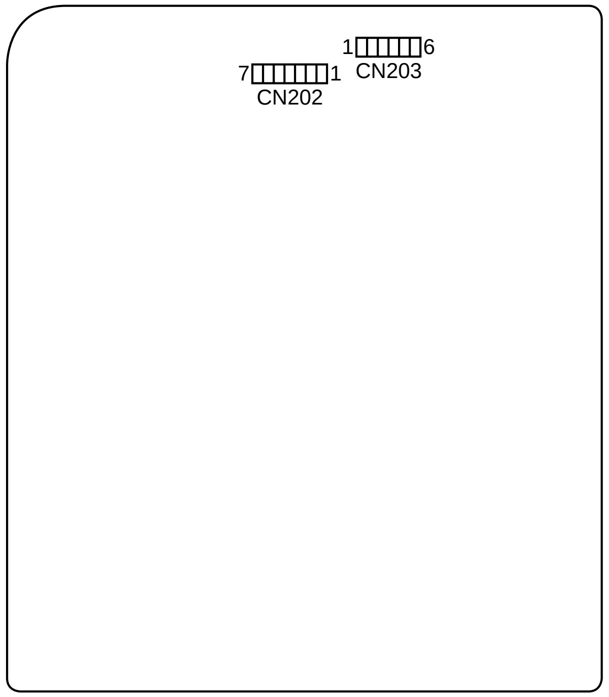
Figure 7-9

7-3. ADJUSTMENT RELATED PARTS ARRANGEMENT

MB-85 BOARD (SIDE A)



HS-030SH BOARD (SIDE A)



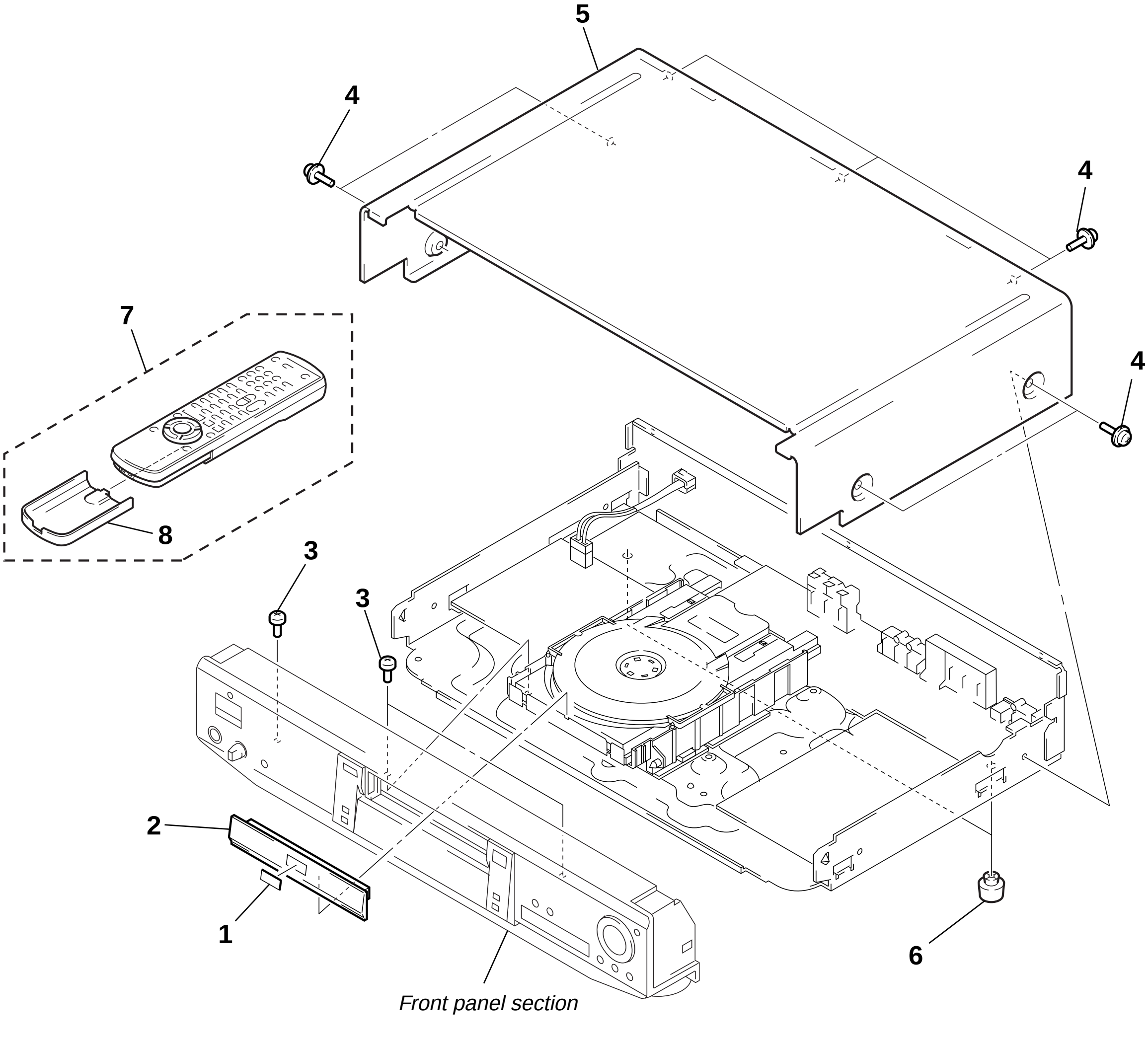
SECTION 8
REPAIR PARTS LIST

8-1. EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

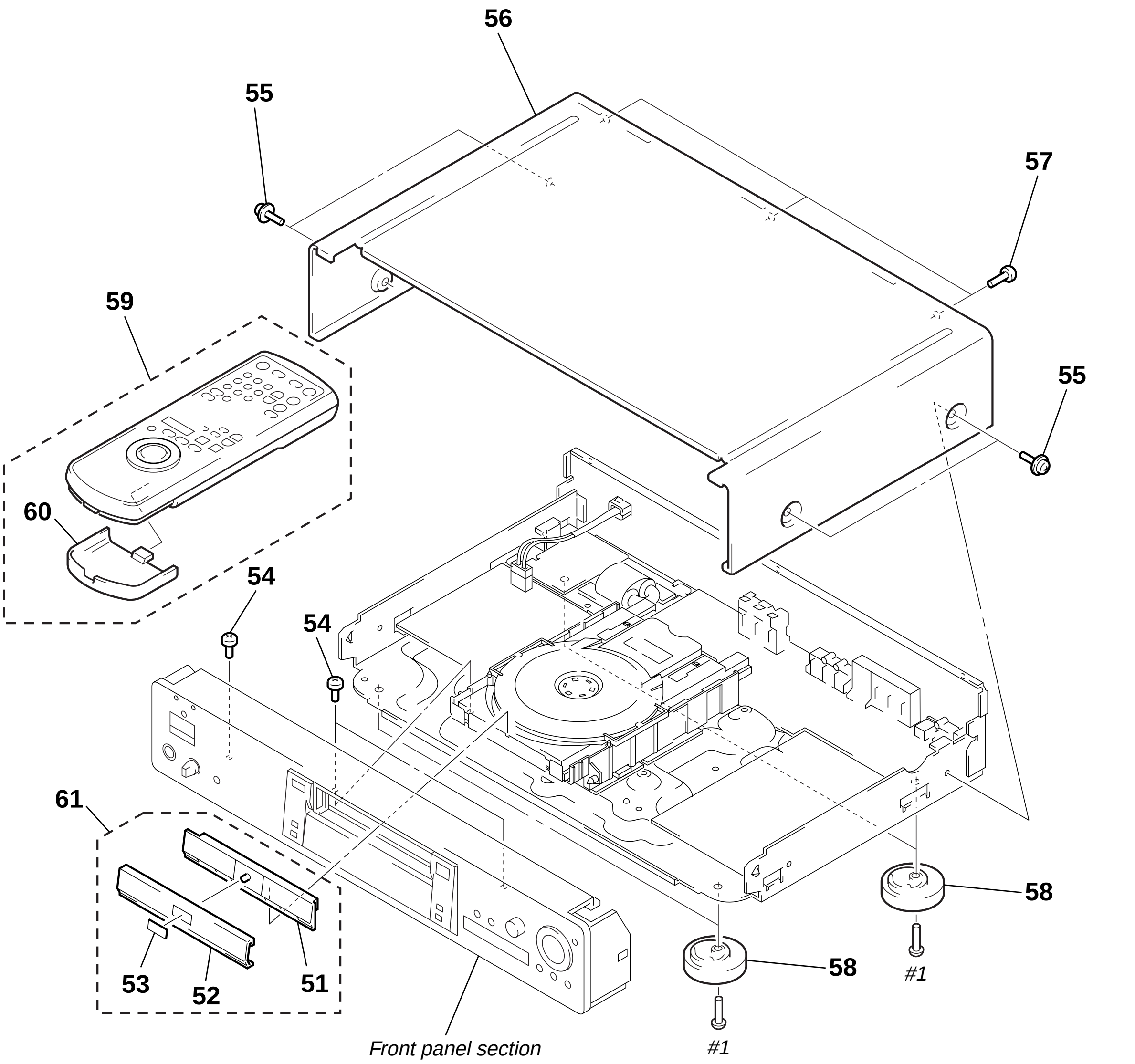
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

8-1-1. CASE ASSEMBLY (S525D)



Ref. No.	Part No.	Description	Remark
1	3-056-508-01	EMBLEM, DVD	
2	3-053-498-01	COVER (BK), TRAY	
3	3-970-608-01	SUMITITE (B3), +BV	
4	3-710-901-41	SCREW, TAPPING	
5	3-053-510-01	CASE, TOP	
6	3-973-973-01	FOOT (S)	
7	1-418-320-31	COMMANDER, STANDARD (RMT-D108P)	
8	3-053-633-01	COVER, BATTERY (for RMT-D108P)	

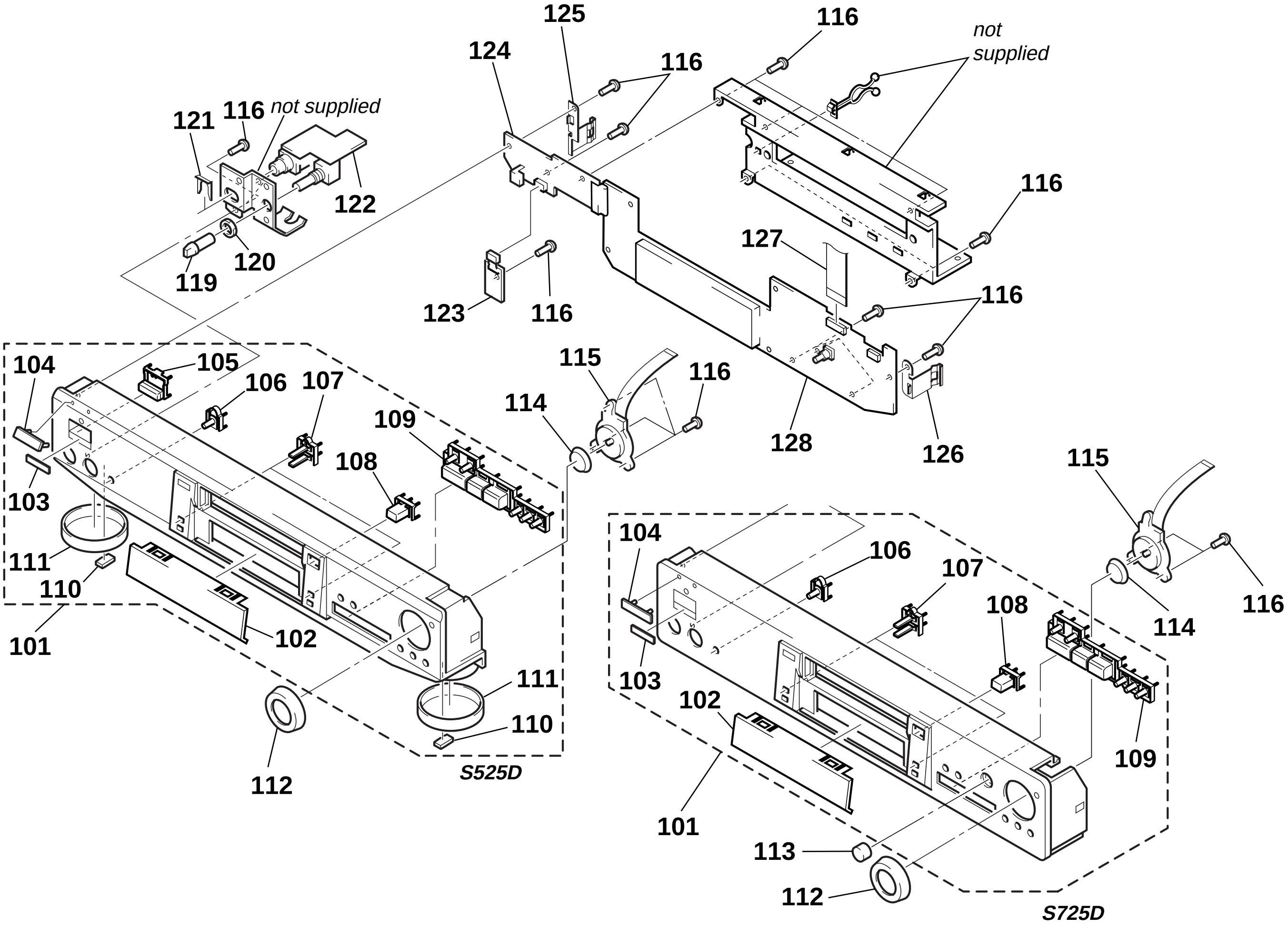
8-1-2. CASE ASSEMBLY (S725D)



Ref. No.	Part No.	Description	Remark
51	3-053-493-01	ORNAMENT (M), TRAY	
52	3-053-492-11	ORNAMENT (AL), TRAY (BLACK)	
52	3-053-492-21	ORNAMENT (AL), TRAY (SILVER)	
53	3-975-726-31	EMBLEM, DVD (SILVER)	
53	3-975-726-41	EMBLEM, DVD (BLACK)	
54	3-970-608-01	SUMITITE (B3), +BV	
55	3-710-901-41	SCREW, TAPPING (BLACK)	
55	3-710-901-51	SCREW, TAPPING (SILVER)	

Ref. No.	Part No.	Description	Remark
56	X-3949-707-1	CASE ASSY, TOP (BLACK)	
56	X-3949-708-1	CASE ASSY, TOP (SILVER)	
57	3-053-984-01	SCREW (+BV/CU)	
58	X-3945-872-1	FOOT ASSY	
59	1-418-321-31	COMMANDER, STANDARD (RMT-D111P)	
60	3-055-539-01	COVER, BATTERY (for RMT-D111P)	
61	X-3949-298-1	COVER ASSY, TRAY (SILVER)	
61	X-3949-299-1	COVER ASSY, TRAY (BLACK)	

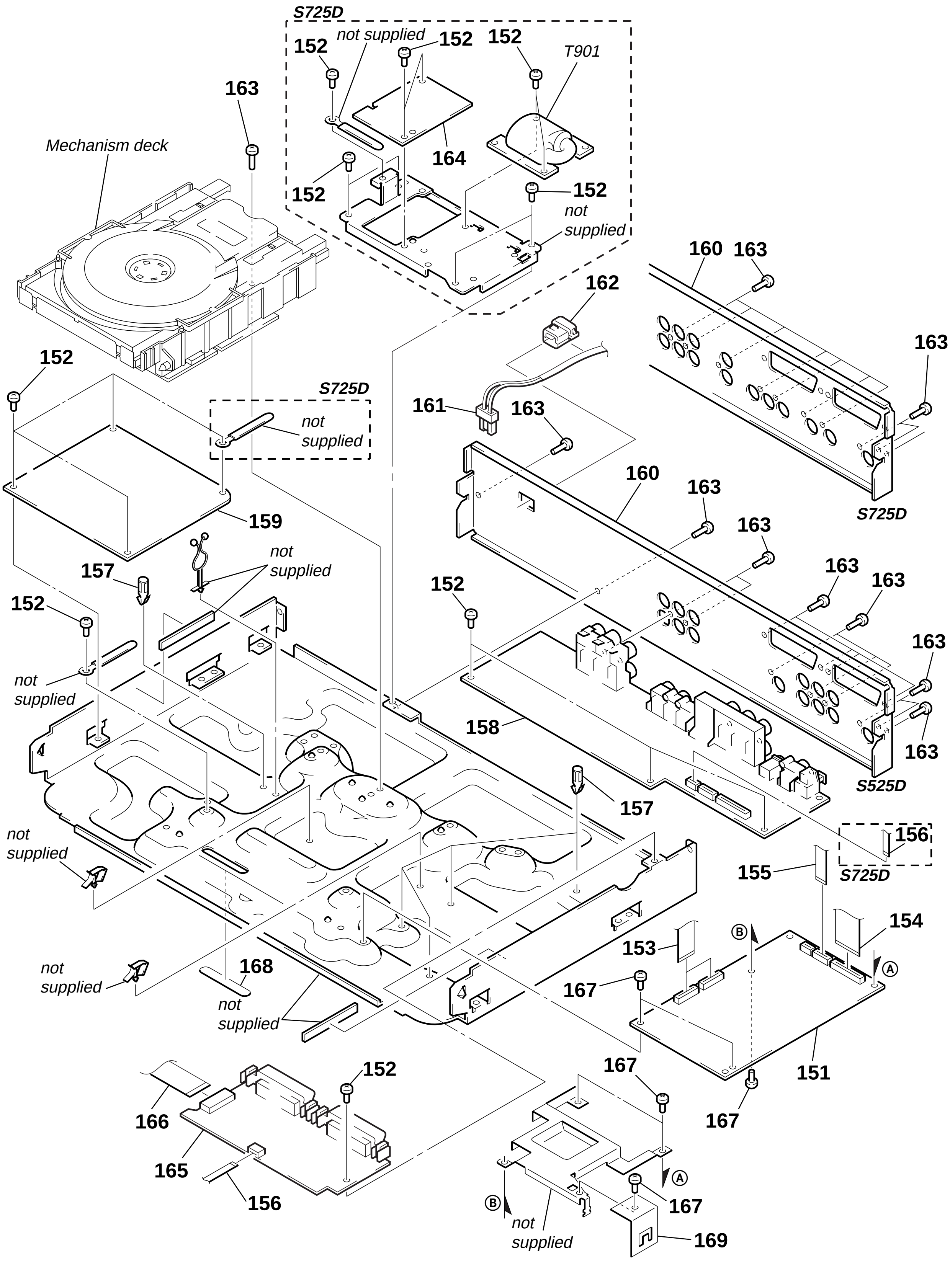
8-1-3. FRONT PANEL ASSEMBLY



Ref. No.	Part No.	Description	Remark
101	X-3949-303-1	PANEL ASSY, FRONT (S525D)	
101	X-3949-308-1	PANEL ASSY, FRONT (BLACK) (S725D)	
101	X-3949-511-1	PANEL ASSY, FRONT (SILVER) (S725D)	
102	3-053-483-01	WINDOW (FL)	
103	3-974-997-31	WINDOW, REMOTE CONTROL (BLACK)	
103	3-974-997-51	WINDOW, REMOTE CONTROL (SILVER)	
104	4-942-568-01	EMBLEM (NO.5), SONY (BLACK) (S725D)	
104	4-942-568-61	EMBLEM (NO.5), SONY (SILVER) (S725D)	
104	4-963-404-21	EMBLEM (5-A), SONY (S525D)	
105	3-988-030-51	BUTTON, POWER	
106	X-3949-309-1	BUTTON (VES) ASSY (BLACK)	
106	X-3949-311-1	BUTTON (VES) ASSY (SILVER)	
107	3-053-479-01	BUTTON (PROG) (BLACK)	
107	3-053-479-21	BUTTON (PROG) (SILVER)	
108	3-053-517-01	BUTTON (OPEN) (BLACK)	
108	3-053-517-21	BUTTON (OPEN) (SILVER)	
109	3-053-480-01	BUTTON (PLAY) (BLACK)	
109	3-053-480-21	BUTTON (PLAY) (SILVER)	
110	3-053-504-01	CUSHION	
111	4-981-435-11	RING (DIA. 50), ORNAMENTAL	
112	X-3949-294-1	RING ASSY, SHUTTLE (BLACK)	
112	X-3949-313-1	RING ASSY, SHUTTLE (SILVER)	

Ref. No.	Part No.	Description	Remark
113	3-053-482-01	KNOB (ACS) (BLACK)	
113	3-053-482-41	KNOB (ACS) (SILVER)	
114	3-988-016-01	STICK, CURSOR (BLACK)	
114	3-988-016-61	STICK, CURSOR (SILVER)	
115	1-418-097-11	ENCODER, ROTARY	
116	4-951-620-01	SCREW (2.6X8), +BVTP	
119	3-945-284-51	KNOB, VOLUME (BLACK)	
119	3-945-284-81	KNOB, VOLUME (SILVER)	
120	2-118-268-01	NUT (M9), HEXAGON	
* 121	3-684-436-01	PLATE, MOUNT	
* 122	A-6065-229-A	HP-108 BOARD, COMPLETE (S525D)	
* 122	A-6065-252-A	HP-110 BOARD, COMPLETE (S725D)	
* 123	A-6065-230-A	SW-314 BOARD, COMPLETE (S525D)	
* 123	A-6065-253-A	SW-316 BOARD, COMPLETE (S725D)	
* 124	A-6065-228-A	FR-147 BOARD, COMPLETE (S525D)	
* 124	A-6065-251-A	FR-149 BOARD, COMPLETE (S725D)	
125	3-054-216-01	PLATE (SL), GROUND	
126	3-053-512-01	PLATE (S), GROUND	
127	1-790-167-11	CABLE, FLEXIBLE FLAT (FMF-35)	
* 128	A-6065-227-A	FL-98 BOARD, COMPLETE (S525D)	
* 128	A-6065-250-A	FL-100 BOARD, COMPLETE (S725D)	

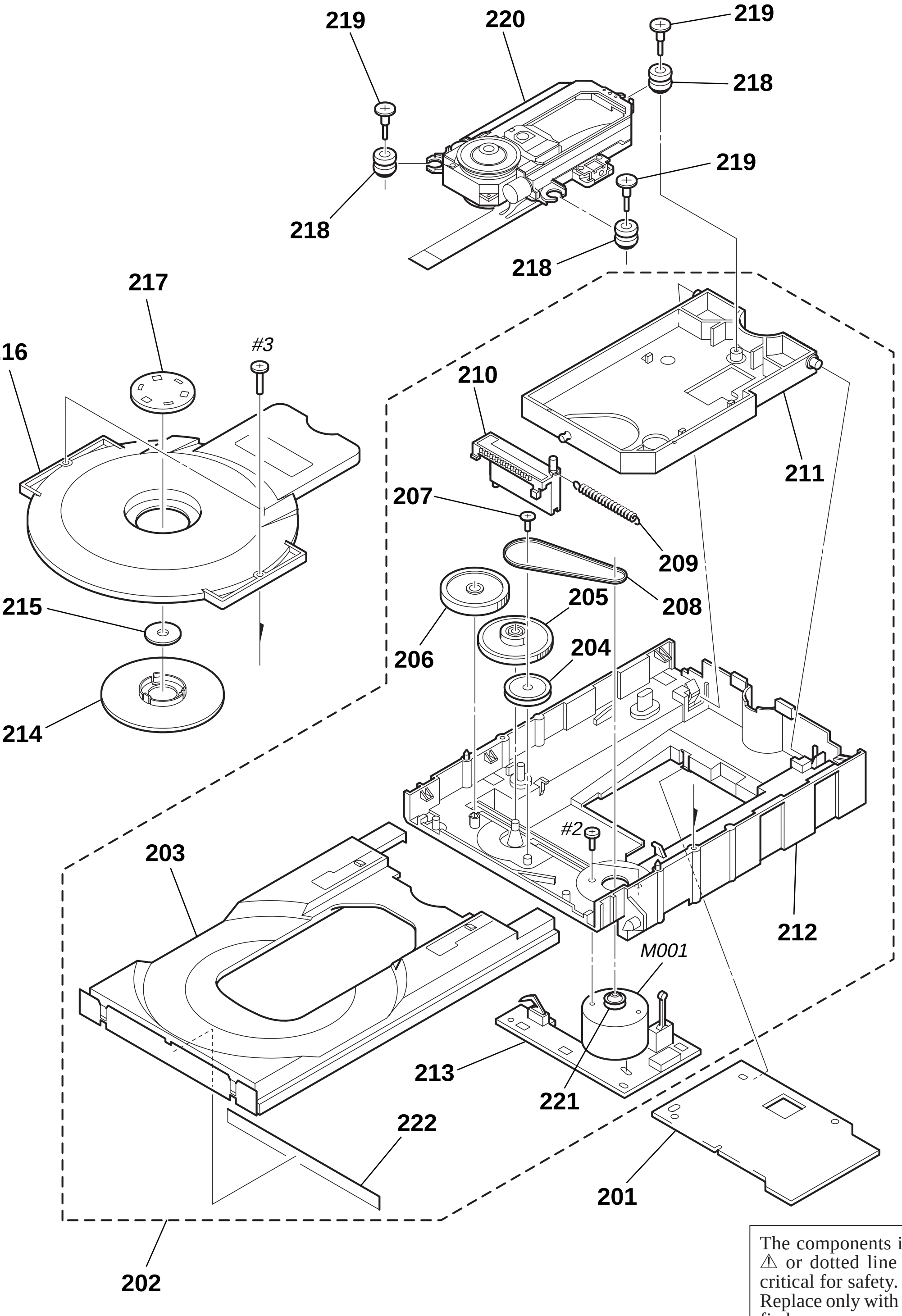
8-1-4. CHASSIS ASSEMBLY



Ref. No.	Part No.	Description	Remark
* 151	A-6065-388-A	MB-85 BOARD, COMPLETE (S525D)	
* 151	A-6065-387-A	MB-85 BOARD, COMPLETE (S725D)	
152	3-970-608-01	SUMITITE (B3), +BV	
153	1-790-166-11	CABLE, FLEXIBLE FLAT (FMT-25)	
154	1-790-163-11	CABLE, FLEXIBLE FLAT (FMA-7)	
155	1-790-164-11	CABLE, FLEXIBLE FLAT (FMA-8)	
156	1-790-165-11	CABLE, FLEXIBLE FLAT (FMA-9)	
* 157	3-669-610-00	SPACER	
* 158	A-6065-225-A	AU-209 BOARD, COMPLETE (S525D)	
* 158	A-6065-248-A	AU-211 BOARD, COMPLETE (S725D)	
* 159	1-468-359-11	POWER BLOCK (HS-030SH)	
160	3-053-507-21	PANEL, REAR (S525D)	
160	X-3949-703-1	PANEL ASSY, REAR (S725D)	
⚠161	1-769-744-91	CORD, POWER	
162	4-966-267-11	BUSHING (FBS001), CORD	
163	3-970-608-51	SUMITITE (B3), +BV	
* 164	A-6065-255-A	RY-12 BOARD, COMPLETE (S725D)	
* 165	A-6065-355-A	ER-4 BOARD, COMPLETE (S525D)	
* 165	A-6065-249-A	ER-5 BOARD, COMPLETE (S725D)	
166	1-790-168-11	CABLE, FLEXIBLE FLAT (FEA-4) (S725D)	
166	1-790-408-11	CABLE, FLEXIBLE FLAT (FME-4) (S525D)	
167	3-055-791-01	SUMITITE (B3), (RING), +BV	
168	3-055-418-01	COVER, EJECT	
169	3-054-650-01	SPRING, EMC	
⚠T901	1-431-175-21	TRANSFORMER, POWER (S725D)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

8-1-5. MECHANISM DECK ASSEMBLY



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 201	A-6065-256-A	TK-54 BOARD, COMPLETE	
202	A-6062-120-A	LOADING ASSY	
203	3-053-837-01	TRAY	
204	3-053-841-01	PULLEY GEAR	
205	3-053-840-01	CAM DRIVING GEAR	
206	3-053-839-01	TRAY DRIVING GEAR	
207	4-974-711-01	SCREW (2X5) (P TYIGHT), (+) PTTWH	
208	3-053-842-01	BELT	
209	3-053-849-01	SPRING, TENSION	
210	3-053-838-01	CHUCK CAM	
211	3-053-836-01	BASE UNIT HOLDER	
212	3-053-835-01	BASE, LOADING	
* 213	A-6066-012-A	MS-29 BOARD, COMPLETE	
214	3-053-845-01	CHUCK PLATE	
215	3-053-844-01	YOKE	
216	3-053-848-01	CHUCK HOLDER	
217	3-053-846-01	YOKE HOLDER	
218	3-053-847-01	INSULATOR	
219	4-981-923-01	SCREW (M), STEP	
⚠220	8-820-081-03	OPTICAL PICK-UP KHM-220AAA/J1RP	
221	3-053-843-01	MOTOR PULLEY	
222	3-055-097-01	SEAL,DUST TRAY	
M001	1-541-632-11	MOTOR, DC (LOADING)	

8-2. ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Not all of the parts for POWER BLOCK (HS-030SH) are listed.
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-6065-225-A	AU-209 BOARD, COMPLETE (S525D)				
		************************				
		(Ref. No. 2,000 Series)				
		< CAPACITOR >				
C302	1-126-926-11	ELECT	1000uF	20%	10V	
C303	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C304	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C305	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	
C306	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	
C307	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	
C308	1-163-009-11	CERAMIC CHIP	1000PF	10%	50V	
C310	1-163-009-11	CERAMIC CHIP	1000PF	10%	50V	
C321	1-104-665-11	ELECT	100uF	20%	10V	
C322	1-104-665-11	ELECT	100uF	20%	10V	
C323	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C324	1-126-935-11	ELECT	470uF	20%	6.3V	
C325	1-126-935-11	ELECT	470uF	20%	6.3V	
C326	1-104-664-11	ELECT	47uF	20%	16V	
C327	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C343	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	
C344	1-126-960-11	ELECT	1uF	20%	50V	
C345	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C351	1-163-233-11	CERAMIC CHIP	18PF	5%	50V	
C361	1-164-346-11	CERAMIC CHIP	1uF		16V	
C362	1-164-346-11	CERAMIC CHIP	1uF		16V	
C363	1-164-346-11	CERAMIC CHIP	1uF		16V	
C364	1-164-346-11	CERAMIC CHIP	1uF		16V	
C365	1-164-346-11	CERAMIC CHIP	1uF		16V	
C366	1-164-346-11	CERAMIC CHIP	1uF		16V	
C367	1-164-346-11	CERAMIC CHIP	1uF		16V	
C368	1-164-346-11	CERAMIC CHIP	1uF		16V	
C401	1-104-665-11	ELECT	100uF	20%	10V	
C404	1-104-665-11	ELECT	100uF	20%	10V	
C431	1-104-664-11	ELECT	47uF	20%	16V	
C432	1-104-664-11	ELECT	47uF	20%	16V	
C433	1-104-665-11	ELECT	100uF	20%	10V	
C434	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C435	1-104-665-11	ELECT	100uF	20%	10V	
C436	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C437	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C438	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C439	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C440	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C442	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C443	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C447	1-136-850-11	FILM	0.1uF	5%	63V	
C448	1-104-664-11	ELECT	47uF	20%	16V	
C449	1-104-664-11	ELECT	47uF	20%	16V	
C450	1-136-850-11	FILM	0.1uF	5%	63V	
C501	1-104-664-11	ELECT	47uF	20%	16V	
C502	1-104-664-11	ELECT	47uF	20%	16V	
C503	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C504	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C505	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C506	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C507	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C508	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C509	1-136-850-11	FILM	0.1uF	5%	63V	
C512	1-136-850-11	FILM	0.1uF	5%	63V	
C513	1-104-664-11	ELECT	47uF	20%	16V	
C514	1-104-664-11	ELECT	47uF	20%	16V	
C521	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C522	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C523	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C524	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C525	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C526	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C541	1-104-664-11	ELECT	47uF	20%	16V	
C542	1-104-664-11	ELECT	47uF	20%	16V	
C543	1-163-130-00	CERAMIC CHIP	360PF	5%	50V	
C544	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	
C545	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C546	1-163-130-00	CERAMIC CHIP	360PF	5%	50V	
C547	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	
C548	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C549	1-104-664-11	ELECT	47uF	20%	16V	
C550	1-104-664-11	ELECT	47uF	20%	16V	
C571	1-104-664-11	ELECT	47uF	20%	16V	
C572	1-104-664-11	ELECT	47uF	20%	16V	
C573	1-163-130-00	CERAMIC CHIP	360PF	5%	50V	
C574	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V	
C575	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C576	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V	
C577	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	

Ref. No.	Part No.	Description			Remark
C578	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C579	1-104-664-11	ELECT	47uF	20%	16V
C580	1-104-664-11	ELECT	47uF	20%	16V
C590	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C591	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
		< CONNECTOR >			
CN301	1-785-698-11	CONNECTOR, FFC/FPC 28P			
CN302	1-785-695-11	CONNECTOR, FFC/FPC 13P			
CN305	1-785-697-11	CONNECTOR, FFC/FPC 18P			
CN401	1-564-002-11	PIN, CONNECTOR 3P			
		< DIODE >			
D301	8-719-988-61	DIODE 1SS355TE-17			
D304	8-719-071-15	DIODE HZM6.8ZWA1TL			
D306	8-719-071-15	DIODE HZM6.8ZWA1TL			
D308	8-719-988-61	DIODE 1SS355TE-17			
D431	8-719-988-61	DIODE 1SS355TE-17			
D432	8-719-988-61	DIODE 1SS355TE-17			
D525	8-719-988-61	DIODE 1SS355TE-17			
D526	8-719-988-61	DIODE 1SS355TE-17			
D551	8-719-988-61	DIODE 1SS355TE-17			
D552	8-719-988-61	DIODE 1SS355TE-17			
D591	8-719-988-61	DIODE 1SS355TE-17			
D592	8-719-988-61	DIODE 1SS355TE-17			
		< EARTH TERMINAL >			
* ET301	1-537-738-21	TERMINAL, EARTH			
* ET302	1-537-738-21	TERMINAL, EARTH			
* ET303	1-537-738-21	TERMINAL, EARTH			
		< FERRITE BEAD >			
FB306	1-414-553-11	FERRITE	0uH		
FB307	1-414-553-11	FERRITE	0uH		
FB308	1-414-553-11	FERRITE	0uH		
FB309	1-414-553-11	FERRITE	0uH		
FB310	1-414-553-11	FERRITE	0uH		
FB311	1-414-553-11	FERRITE	0uH		
FB312	1-414-553-11	FERRITE	0uH		
FB314	1-414-553-11	FERRITE	0uH		
FB316	1-414-553-11	FERRITE	0uH		
FB321	1-414-553-11	FERRITE	0uH		
FB322	1-414-553-11	FERRITE	0uH		
FB323	1-414-553-11	FERRITE	0uH		
FB341	1-414-135-11	FERRITE	0uH		
FB342	1-414-553-11	FERRITE	0uH		
FB401	1-414-553-11	FERRITE	0uH		
FB402	1-414-553-11	FERRITE	0uH		
FB403	1-414-553-11	FERRITE	0uH		
FB404	1-414-553-11	FERRITE	0uH		
FB405	1-414-553-11	FERRITE	0uH		
FB406	1-414-553-11	FERRITE	0uH		
FB407	1-414-553-11	FERRITE	0uH		
FB408	1-414-553-11	FERRITE	0uH		
FB409	1-414-553-11	FERRITE	0uH		
		< IC >			
IC301	8-759-701-58	IC NJM78M08FA			
IC302	8-759-982-54	IC RC79M09FA			
IC321	8-759-563-79	IC BA7660F-E2			
IC401	8-759-909-71	IC BA4558F			

Ref. No.	Part No.	Description		Remark
IC431	8-759-909-71	IC BA4558F		
IC502	8-759-909-71	IC BA4558F		
IC505	8-749-921-12	IC GP1F32T		
IC541	8-759-909-71	IC BA4558F		
IC571	8-759-909-71	IC BA4558F		
		< JACK >		
J502	1-779-382-11	JACK, PIN 1P (COAXIAL)		
J506	1-785-537-11	JACK, PIN (3P) (LINE OUT)		
J507	1-537-943-11	TERMINAL, S (S VIDEO OUT)		
J508	1-785-536-11	JACK, PIN (6P) (5.1CH OUTPUT)		
		< JUMPER RESISTOR >		
JR401	1-216-296-91	SHORT	0	
JR402	1-216-296-91	SHORT	0	
JR403	1-216-295-91	SHORT	0	
JR404	1-216-295-91	SHORT	0	
JR405	1-216-296-91	SHORT	0	
JR406	1-216-296-91	SHORT	0	
JR407	1-216-296-91	SHORT	0	
JR408	1-216-296-91	SHORT	0	
JR409	1-216-296-91	SHORT	0	
JR410	1-216-296-91	SHORT	0	
JR411	1-216-295-91	SHORT	0	
JR412	1-216-295-91	SHORT	0	
JR413	1-216-296-91	SHORT	0	
JR414	1-216-296-91	SHORT	0	
JR415	1-216-296-91	SHORT	0	
JR418	1-216-295-91	SHORT	0	
JR419	1-216-296-91	SHORT	0	
JR420	1-216-296-91	SHORT	0	
JR421	1-216-295-91	SHORT	0	
JR422	1-216-296-91	SHORT	0	
JR424	1-216-296-91	SHORT	0	
JR425	1-216-295-91	SHORT	0	
JR427	1-216-296-91	SHORT	0	
JR428	1-216-296-91	SHORT	0	
JR429	1-216-296-91	SHORT	0	
JR433	1-216-295-91	SHORT	0	
JR434	1-216-296-91	SHORT	0	
JR435	1-216-296-91	SHORT	0	
JR436	1-216-295-91	SHORT	0	
JR437	1-216-295-91	SHORT	0	
JR438	1-216-296-91	SHORT	0	
JR439	1-216-296-91	SHORT	0	
JR446	1-216-295-91	SHORT	0	
JR447	1-216-295-91	SHORT	0	
		< COIL >		
L301	1-412-953-11	INDUCTOR	15uH	
L302	1-412-953-11	INDUCTOR	15uH	
L303	1-412-953-11	INDUCTOR	15uH	
L321	1-412-963-11	INDUCTOR	100uH	
		< TRANSISTOR >		
Q301	8-729-424-08	TRANSISTOR UN2111		
Q303	8-729-216-22	TRANSISTOR 2SA1162		
Q304	8-729-421-19	TRANSISTOR UN2213		
Q305	8-729-424-08	TRANSISTOR UN2111		
Q306	8-729-424-08	TRANSISTOR UN2111		

Ref. No.	Part No.	Description				Remark
Q307	8-729-424-08	TRANSISTOR	UN2111			
Q308	8-729-424-08	TRANSISTOR	UN2111			
Q309	8-729-424-08	TRANSISTOR	UN2111			
Q310	8-729-424-08	TRANSISTOR	UN2111			
Q311	8-729-424-08	TRANSISTOR	UN2111			
Q314	8-729-424-08	TRANSISTOR	UN2111			
Q315	8-729-421-19	TRANSISTOR	UN2213			
Q321	8-729-421-19	TRANSISTOR	UN2213			
Q322	8-729-424-08	TRANSISTOR	UN2111			
Q341	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q361	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q362	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q401	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q402	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q431	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q432	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q435	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q436	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q503	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q504	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q543	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q544	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q573	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
Q574	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO			
		< RESISTOR >				
R303	1-216-042-00	METAL CHIP	510	5%	1/10W	
R304	1-216-042-00	METAL CHIP	510	5%	1/10W	
R305	1-216-042-00	METAL CHIP	510	5%	1/10W	
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R309	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R311	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R313	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R314	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R315	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R316	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R318	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R319	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R320	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R321	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R322	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R323	1-216-021-00	METAL CHIP	68	5%	1/10W	
R324	1-216-021-00	METAL CHIP	68	5%	1/10W	
R325	1-216-295-91	SHORT	0			
R326	1-216-021-00	METAL CHIP	68	5%	1/10W	
R327	1-216-021-00	METAL CHIP	68	5%	1/10W	
R328	1-216-021-00	METAL CHIP	68	5%	1/10W	
R330	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R333	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R334	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R341	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R342	1-216-063-91	RES, CHIP	3.9K	5%	1/10W	
R343	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R344	1-216-033-00	METAL CHIP	220	5%	1/10W	
R345	1-216-021-00	METAL CHIP	68	5%	1/10W	
R346	1-216-025-91	RES, CHIP	100	5%	1/10W	
R347	1-216-295-91	SHORT	0			
R348	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R361	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R362	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R401	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R402	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R403	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R404	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R405	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R406	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R407	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R408	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R409	1-216-025-91	RES, CHIP	100	5%	1/10W	
R410	1-216-025-91	RES, CHIP	100	5%	1/10W	
R411	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R412	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R431	1-216-089-91	METAL CHIP	47K	5%	1/10W	
R432	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R433	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R434	1-216-089-91	METAL CHIP	47K	5%	1/10W	
R435	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R436	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R437	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R438	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R439	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R440	1-216-295-91	SHORT	0			
R441	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R443	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R444	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R445	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R446	1-216-047-91	RES, CHIP	820	5%	1/10W	
R447	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R448	1-216-047-91	RES, CHIP	820	5%	1/10W	
R449	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R450	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R451	1-216-041-00	METAL CHIP	470	5%	1/10W	
R452	1-216-041-00	METAL CHIP	470	5%	1/10W	
R455	1-216-097-91	RES, CHIP	100K	5%	1/10W	
R456	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R457	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R458	1-216-041-00	METAL CHIP	470	5%	1/10W	
R459	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R460	1-216-041-00	METAL CHIP	470	5%	1/10W	
R461	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R501	1-216-089-91	METAL CHIP	47K	5%	1/10W	
R502	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R503	1-216-089-91	METAL CHIP	47K	5%	1/10W	
R504	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R510	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R511	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R512	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R513	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R514	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R517	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R519	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R520	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R521	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R522	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R523	1-216-041-00	METAL CHIP	470	5%	1/10W	
R524	1-216-041-00	METAL CHIP	470	5%	1/10W	
R525	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R526	1-216-025-91	RES, CHIP	100	5%	1/10W	
R527	1-216-025-91	RES, CHIP	100	5%	1/10W	
R528	1-216-049-91	RES, CHIP	1K	5%	1/10W	
R541	1-216-089-91	METAL CHIP	47K	5%	1/10W	

Ref. No.	Part No.	Description			Remark
R542	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R543	1-216-089-91	METAL CHIP	47K	5%	1/10W
R544	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R545	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R546	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R547	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R548	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R549	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R553	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R555	1-216-109-00	METAL CHIP	330K	5%	1/10W
R556	1-216-109-00	METAL CHIP	330K	5%	1/10W
R557	1-216-041-00	METAL CHIP	470	5%	1/10W
R558	1-216-041-00	METAL CHIP	470	5%	1/10W
R559	1-216-049-91	RES, CHIP	1K	5%	1/10W
R560	1-216-025-91	RES, CHIP	100	5%	1/10W
R561	1-216-025-91	RES, CHIP	100	5%	1/10W
R562	1-216-049-91	RES, CHIP	1K	5%	1/10W
R564	1-216-295-91	SHORT	0		
R569	1-216-295-91	SHORT	0		
R571	1-216-089-91	METAL CHIP	47K	5%	1/10W
R572	1-216-089-91	METAL CHIP	47K	5%	1/10W
R573	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R574	1-216-077-00	METAL CHIP	15K	5%	1/10W
R575	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R576	1-216-077-00	METAL CHIP	15K	5%	1/10W
R577	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R578	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R579	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R580	1-216-079-00	METAL CHIP	18K	5%	1/10W
R585	1-216-109-00	METAL CHIP	330K	5%	1/10W
R586	1-216-109-00	METAL CHIP	330K	5%	1/10W
R587	1-216-041-00	METAL CHIP	470	5%	1/10W
R588	1-216-041-00	METAL CHIP	470	5%	1/10W
R589	1-216-049-91	RES, CHIP	1K	5%	1/10W
R590	1-216-025-91	RES, CHIP	100	5%	1/10W
R591	1-216-025-91	RES, CHIP	100	5%	1/10W
R592	1-216-049-91	RES, CHIP	1K	5%	1/10W
R593	1-216-295-91	SHORT	0		
R598	1-216-295-91	SHORT	0		

* A-6065-248-A AU-211 BOARD, COMPLETE (S725D)
****
(Ref. No. 3,000 Series)

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C302	1-104-665-11	ELECT	100uF	20%	10V
C303	1-104-665-11	ELECT	100uF	20%	10V
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C305	1-126-935-11	ELECT	470uF	20%	6.3V
C306	1-126-935-11	ELECT	470uF	20%	6.3V
C307	1-104-664-11	ELECT	47uF	20%	25V
C309	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C310	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C311	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C312	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C313	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C314	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C315	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C316	1-126-960-11	ELECT	1uF	20%	50V
C317	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C318	1-104-665-11	ELECT	100uF	20%	10V
C319	1-104-665-11	ELECT	100uF	20%	10V
C320	1-104-665-11	ELECT	100uF	20%	10V
C323	1-126-935-11	ELECT	470uF	20%	6.3V
C324	1-126-935-11	ELECT	470uF	20%	6.3V
C325	1-126-935-11	ELECT	470uF	20%	6.3V
C328	1-104-664-11	ELECT	47uF	20%	16V
C330	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C331	1-126-967-11	ELECT	47uF	20%	25V
C361	1-164-346-11	CERAMIC CHIP	1uF		16V
C362	1-164-346-11	CERAMIC CHIP	1uF		16V
C363	1-164-346-11	CERAMIC CHIP	1uF		16V
C364	1-164-346-11	CERAMIC CHIP	1uF		16V
C365	1-164-346-11	CERAMIC CHIP	1uF		16V
C366	1-164-346-11	CERAMIC CHIP	1uF		16V
C367	1-164-346-11	CERAMIC CHIP	1uF		16V
C368	1-164-346-11	CERAMIC CHIP	1uF		16V
C401	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C402	1-126-926-11	ELECT	1000uF	20%	10V
C403	1-128-204-11	ELECT	470uF	20%	63V
C404	1-128-204-11	ELECT	470uF	20%	63V
C405	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C406	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C407	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C408	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C409	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C410	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C411	1-119-828-31	ELECT	100uF	20%	50V
C412	1-119-828-31	ELECT	100uF	20%	50V
C413	1-126-967-11	ELECT	47uF	20%	25V
C414	1-126-967-11	ELECT	47uF	20%	25V
C415	1-126-967-11	ELECT	47uF	20%	25V
C416	1-126-967-11	ELECT	47uF	20%	25V
C417	1-126-967-11	ELECT	47uF	20%	25V
C418	1-126-967-11	ELECT	47uF	20%	25V
C419	1-136-811-11	FILM	330PF	5%	100V
C420	1-117-793-11	MYLAR	330PF	5%	50V
C421	1-117-793-11	MYLAR	330PF	5%	50V
C422	1-106-343-00	MYLAR	1000PF	5%	200V
C423	1-136-811-11	FILM	330PF	5%	100V
C424	1-117-793-11	MYLAR	330PF	5%	50V
C425	1-117-793-11	MYLAR	330PF	5%	50V
C426	1-117-793-11	MYLAR	330PF	5%	50V
C427	1-127-713-21	FILM	10000PF	5%	50V
C428	1-130-483-00	MYLAR	0.01uF	5%	50V
C429	1-130-484-00	MYLAR	0.012uF	5%	50V
C430	1-136-850-11	FILM	0.1uF	5%	63V
C431	1-127-713-21	FILM	10000PF	5%	50V
C432	1-113-577-11	ELECT	47uF	20%	16V
C433	1-113-577-11	ELECT	47uF	20%	16V
C434	1-130-483-00	MYLAR	0.01uF	5%	50V
C435	1-136-850-11	FILM	0.1uF	5%	63V
C436	1-136-850-11	FILM	0.1uF	5%	63V
C437	1-130-484-00	MYLAR	0.012uF	5%	50V
C438	1-136-850-11	FILM	0.1uF	5%	63V
C439	1-136-850-11	FILM	0.1uF	5%	63V
C440	1-130-484-00	MYLAR	0.012uF	5%	50V
C441	1-136-850-11	FILM	0.1uF	5%	63V
C442	1-136-850-11	FILM	0.1uF	5%	63V
C443	1-125-853-21	FILM	470PF	5%	50V

Ref. No.	Part No.	Description			Remark
C444	1-130-467-00	MYLAR	470PF	5%	50V
C445	1-106-343-00	MYLAR	1000PF	5%	200V
C446	1-130-483-00	MYLAR	0.01uF	5%	50V
C447	1-125-853-21	FILM	470PF	5%	50V
C448	1-130-467-00	MYLAR	470PF	5%	50V
C449	1-106-343-00	MYLAR	1000PF	5%	200V
C450	1-106-343-00	MYLAR	1000PF	5%	200V
C451	1-119-828-31	ELECT	100uF	20%	50V
C452	1-136-850-11	FILM	0.1uF	5%	63V
C453	1-136-850-11	FILM	0.1uF	5%	63V
C454	1-119-828-31	ELECT	100uF	20%	50V
C455	1-124-673-11	ELECT	100uF	20%	10V
C456	1-124-673-11	ELECT	100uF	20%	10V
C457	1-124-673-11	ELECT	100uF	20%	10V
C458	1-124-673-11	ELECT	100uF	20%	10V
C459	1-124-673-11	ELECT	100uF	20%	10V
C460	1-124-673-11	ELECT	100uF	20%	10V
C461	1-104-665-11	ELECT	100uF	20%	25V
C464	1-104-665-11	ELECT	100uF	20%	25V
C465	1-128-200-11	ELECT	47uF	20%	63V
C466	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C467	1-128-200-11	ELECT	47uF	20%	63V
C468	1-136-850-11	FILM	0.1uF	5%	63V
C469	1-126-967-11	ELECT	47uF	20%	25V
C470	1-136-850-11	FILM	0.1uF	5%	63V
C471	1-136-850-11	FILM	0.1uF	5%	63V
C472	1-136-850-11	FILM	0.1uF	5%	63V
C473	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C474	1-136-850-11	FILM	0.1uF	5%	63V
C475	1-136-850-11	FILM	0.1uF	5%	63V
C478	1-104-664-11	ELECT	47uF	20%	25V
C479	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C480	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C485	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C486	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C487	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C488	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C489	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C490	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN301	1-564-002-11	PIN, CONNECTOR 3P			
CN302	1-785-697-11	CONNECTOR, FFC/FPC 18P			
* CN401	1-564-241-11	PIN, CONNECTOR (B4P-VH) 4P			
CN402	1-785-698-11	CONNECTOR, FFC/FPC 28P			
CN403	1-785-695-11	CONNECTOR, FFC/FPC 13P			
CN404	1-506-473-11	PIN, CONNECTOR 8P			
CN405	1-785-694-11	CONNECTOR, FFC/FPC 7P			
CN406	1-785-694-11	CONNECTOR, FFC/FPC 7P			
* CN407	1-564-001-11	PIN, CONNECTOR 2P			
		< DIODE >			
D301	8-719-071-15	DIODE HZM6.8ZWA1TL			
D303	8-719-071-15	DIODE HZM6.8ZWA1TL			
D401	8-719-210-21	DIODE 11EQS04			
D402	8-719-210-21	DIODE 11EQS04			
D403	8-719-210-21	DIODE 11EQS04			
D404	8-719-210-21	DIODE 11EQS04			
D405	8-719-988-61	DIODE 1SS355TE-17			
D406	8-719-988-61	DIODE 1SS355TE-17			

Ref. No.	Part No.	Description		Remark
D407	8-719-988-61	DIODE 1SS355TE-17		
D408	8-719-988-61	DIODE 1SS355TE-17		
D409	8-719-988-61	DIODE 1SS355TE-17		
D410	8-719-988-61	DIODE 1SS355TE-17		
D411	8-719-115-87	DIODE RD9.1JS-T4AB2		
D421	8-719-988-61	DIODE 1SS355TE-17		
D422	8-719-988-61	DIODE 1SS355TE-17		
D423	8-719-988-61	DIODE 1SS355TE-17		
D424	8-719-988-61	DIODE 1SS355TE-17		
D425	8-719-988-61	DIODE 1SS355TE-17		
D426	8-719-988-61	DIODE 1SS355TE-17		
D427	8-719-988-61	DIODE 1SS355TE-17		
		< EARTH TERMINAL >		
* ET401	1-537-738-21	TERMINAL, EARTH		
* ET402	1-537-738-21	TERMINAL, EARTH		
* ET403	1-537-738-21	TERMINAL, EARTH		
		< FERRITE BEAD >		
FB301	1-414-135-11	FERRITE	0uH	
FB302	1-414-553-11	FERRITE	0uH	
FB303	1-414-553-11	FERRITE	0uH	
FB304	1-414-553-11	FERRITE	0uH	
FB305	1-414-553-11	FERRITE	0uH	
FB306	1-414-553-11	FERRITE	0uH	
FB307	1-414-553-11	FERRITE	0uH	
FB308	1-414-553-11	FERRITE	0uH	
FB309	1-414-553-11	FERRITE	0uH	
FB311	1-414-553-11	FERRITE	0uH	
FB312	1-414-553-11	FERRITE	0uH	
FB313	1-414-553-11	FERRITE	0uH	
FB314	1-414-553-11	FERRITE	0uH	
FB315	1-414-553-11	FERRITE	0uH	
FB316	1-414-553-11	FERRITE	0uH	
FB317	1-414-553-11	FERRITE	0uH	
FB319	1-414-553-11	FERRITE	0uH	
FB320	1-414-553-11	FERRITE	0uH	
FB321	1-414-553-11	FERRITE	0uH	
FB322	1-414-553-11	FERRITE	0uH	
FB323	1-414-553-11	FERRITE	0uH	
FB324	1-414-553-11	FERRITE	0uH	
FB401	1-414-553-11	FERRITE	0uH	
FB402	1-414-553-11	FERRITE	0uH	
		< IC >		
IC301	8-759-563-79	IC BA7660F-E2		
IC302	8-759-563-79	IC BA7660F-E2		
IC303	8-749-921-12	IC GP1F32T		
IC401	8-759-008-67	IC MC14066BF		
IC403	8-759-059-79	IC BA15532		
IC404	8-759-059-79	IC BA15532		
IC405	8-759-634-51	IC M5218AP		
IC406	8-759-634-51	IC M5218AP		
IC407	8-759-971-80	IC AD712JN		
IC408	8-759-710-59	IC NJM4580D-D		
IC409	8-759-710-59	IC NJM4580D-D		
IC410	8-759-710-59	IC NJM4580D-D		
IC411	8-759-711-85	IC NJM4580E-D		
IC412	8-759-711-85	IC NJM4580E-D		
IC415	8-759-604-35	IC M5F78M05		

AU-211

Ref. No.	Part No.	Description			Remark
		< JACK >			
J301	1-779-382-21	JACK, PIN 1P (COAXIAL)			
J302	1-784-675-11	JACK, PIN 3P (COMPONENT VIDEO OUT)			
J303	1-785-489-11	JACK, PIN 6P (5.1CH OUTPUT)			
J307	1-774-727-11	JACK, PIN 2P (AUDIO OUT)			
J308	1-779-800-11	TERMINAL, S (S VIDEO OUT)			
J309	1-779-795-11	JACK, PIN 1P (VIDEO OUT)			
		< COIL >			
L301	1-412-963-11	INDUCTOR	100uH		
L303	1-412-963-11	INDUCTOR	100uH		
L401	1-412-953-11	INDUCTOR	15uH		
L402	1-412-953-11	INDUCTOR	15uH		
L403	1-412-953-11	INDUCTOR	15uH		
L404	1-412-953-11	INDUCTOR	15uH		
L405	1-412-953-11	INDUCTOR	15uH		
L406	1-412-953-11	INDUCTOR	15uH		
L407	1-412-963-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q301	8-729-421-19	TRANSISTOR	UN2213		
Q302	8-729-424-08	TRANSISTOR	UN2111		
Q303	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q401	8-729-424-08	TRANSISTOR	UN2111		
Q402	8-729-424-08	TRANSISTOR	UN2111		
Q403	8-729-424-08	TRANSISTOR	UN2111		
Q404	8-729-424-08	TRANSISTOR	UN2111		
Q405	8-729-216-22	TRANSISTOR	2SA1162		
Q410	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q411	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q412	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q413	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q414	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q415	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q416	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q417	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q418	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q419	8-729-046-97	TRANSISTOR	2SD1938 (F)-T (TX).SO		
Q420	8-729-141-10	TRANSISTOR	2SA985A		
Q421	8-729-141-58	TRANSISTOR	2SC2275A-QP		
Q422	8-729-224-62	TRANSISTOR	2SK246-GR		
Q423	8-729-421-19	TRANSISTOR	UN2213		
Q424	8-729-421-19	TRANSISTOR	UN2213		
Q425	8-729-422-03	TRANSISTOR	XN1B301-TX		
Q426	8-729-422-03	TRANSISTOR	XN1B301-TX		
Q427	8-729-422-03	TRANSISTOR	XN1B301-TX		
Q431	8-729-424-08	TRANSISTOR	UN2111		
Q432	8-729-424-08	TRANSISTOR	UN2111		
Q433	8-729-424-08	TRANSISTOR	UN2111		
Q434	8-729-424-08	TRANSISTOR	UN2111		
Q435	8-729-421-19	TRANSISTOR	UN2213		
Q437	8-729-424-08	TRANSISTOR	UN2111		
Q438	8-729-421-19	TRANSISTOR	UN2213		
Q439	8-729-424-08	TRANSISTOR	UN2111		
Q440	8-729-421-19	TRANSISTOR	UN2213		
		< RESISTOR >			
R301	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R302	1-216-073-00	METAL CHIP	10K	5%	1/10W
R303	1-216-073-00	METAL CHIP	10K	5%	1/10W
R304	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R305	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R306	1-216-021-00	METAL CHIP	68	5%	1/10W
R307	1-216-021-00	METAL CHIP	68	5%	1/10W
R308	1-216-295-91	SHORT	0		
R309	1-216-021-00	METAL CHIP	68	5%	1/10W
R310	1-216-021-00	METAL CHIP	68	5%	1/10W
R311	1-216-021-00	METAL CHIP	68	5%	1/10W
R312	1-216-033-00	METAL CHIP	220	5%	1/10W
R313	1-216-021-00	METAL CHIP	68	5%	1/10W
R314	1-216-025-91	RES, CHIP	100	5%	1/10W
R315	1-216-021-00	METAL CHIP	68	5%	1/10W
R316	1-216-021-00	METAL CHIP	68	5%	1/10W
R317	1-216-021-00	METAL CHIP	68	5%	1/10W
R320	1-216-073-00	METAL CHIP	10K	5%	1/10W
R348	1-216-097-91	RES, CHIP	100K	5%	1/10W
R350	1-216-295-91	SHORT	0		
R400	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R401	1-216-037-00	METAL CHIP	330	5%	1/10W
R402	1-216-047-91	RES, CHIP	820	5%	1/10W
R403	1-216-042-00	METAL CHIP	510	5%	1/10W
R404	1-216-047-91	RES, CHIP	820	5%	1/10W
R405	1-216-042-00	METAL CHIP	510	5%	1/10W
R406	1-216-047-91	RES, CHIP	820	5%	1/10W
R407	1-216-042-00	METAL CHIP	510	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-097-91	RES, CHIP	100K	5%	1/10W
R410	1-216-097-91	RES, CHIP	100K	5%	1/10W
R411	1-216-097-91	RES, CHIP	100K	5%	1/10W
R412	1-216-097-91	RES, CHIP	100K	5%	1/10W
R413	1-216-073-00	METAL CHIP	10K	5%	1/10W
R414	1-216-097-91	RES, CHIP	100K	5%	1/10W
R415	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R416	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R417	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R418	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R419	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R420	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R423	1-216-109-00	METAL CHIP	330K	5%	1/10W
R425	1-216-109-00	METAL CHIP	330K	5%	1/10W
R426	1-216-109-00	METAL CHIP	330K	5%	1/10W
R428	1-216-109-00	METAL CHIP	330K	5%	1/10W
R429	1-216-109-00	METAL CHIP	330K	5%	1/10W
R430	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R431	1-216-109-00	METAL CHIP	330K	5%	1/10W
R432	1-216-109-00	METAL CHIP	330K	5%	1/10W
R433	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R434	1-216-109-00	METAL CHIP	330K	5%	1/10W
R435	1-216-049-91	RES, CHIP	1K	5%	1/10W
R437	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R438	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R439	1-259-452-11	CARBON	10K	5%	1/6W
R440	1-216-073-00	METAL CHIP	10K	5%	1/10W
R441	1-216-073-00	METAL CHIP	10K	5%	1/10W
R442	1-216-075-00	METAL CHIP	12K	5%	1/10W
R443	1-259-452-11	CARBON	10K	5%	1/6W
R444	1-216-073-00	METAL CHIP	10K	5%	1/10W
R445	1-216-073-00	METAL CHIP	10K	5%	1/10W
R446	1-216-073-00	METAL CHIP	10K	5%	1/10W
R447	1-259-426-11	CARBON	820	5%	1/6W

Ref. No.	Part No.	Description			Remark
R448	1-216-047-91	RES, CHIP	820	5%	1/10W
R449	1-216-047-91	RES, CHIP	820	5%	1/10W
R450	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R451	1-259-426-11	CARBON	820	5%	1/6W
R452	1-216-047-91	RES, CHIP	820	5%	1/10W
R453	1-216-047-91	RES, CHIP	820	5%	1/10W
R454	1-216-047-91	RES, CHIP	820	5%	1/10W
R455	1-259-434-11	CARBON	1.8K	5%	1/6W
R456	1-259-424-11	CARBON	680	5%	1/6W
R457	1-259-424-11	CARBON	680	5%	1/6W
R458	1-259-434-11	CARBON	1.8K	5%	1/6W
R459	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R460	1-216-045-00	METAL CHIP	680	5%	1/10W
R461	1-216-045-00	METAL CHIP	680	5%	1/10W
R462	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R463	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R464	1-216-045-00	METAL CHIP	680	5%	1/10W
R465	1-216-045-00	METAL CHIP	680	5%	1/10W
R466	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R467	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R468	1-216-045-00	METAL CHIP	680	5%	1/10W
R469	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R470	1-216-075-00	METAL CHIP	12K	5%	1/10W
R471	1-216-109-00	METAL CHIP	330K	5%	1/10W
R472	1-216-109-00	METAL CHIP	330K	5%	1/10W
R473	1-216-109-00	METAL CHIP	330K	5%	1/10W
R474	1-216-109-00	METAL CHIP	330K	5%	1/10W
R475	1-216-109-00	METAL CHIP	330K	5%	1/10W
R476	1-216-109-00	METAL CHIP	330K	5%	1/10W
R477	1-216-109-00	METAL CHIP	330K	5%	1/10W
R478	1-216-109-00	METAL CHIP	330K	5%	1/10W
R479	1-259-412-11	CARBON	220	5%	1/6W
R480	1-216-041-00	METAL CHIP	470	5%	1/10W
R481	1-216-041-00	METAL CHIP	470	5%	1/10W
R482	1-216-041-00	METAL CHIP	470	5%	1/10W
R483	1-216-085-00	METAL CHIP	33K	5%	1/10W
R484	1-216-085-00	METAL CHIP	33K	5%	1/10W
R485	1-259-412-11	CARBON	220	5%	1/6W
R486	1-216-041-00	METAL CHIP	470	5%	1/10W
R487	1-216-041-00	METAL CHIP	470	5%	1/10W
R488	1-216-041-00	METAL CHIP	470	5%	1/10W
R489	1-216-049-91	RES, CHIP	1K	5%	1/10W
R490	1-216-049-91	RES, CHIP	1K	5%	1/10W
R491	1-216-049-91	RES, CHIP	1K	5%	1/10W
R492	1-216-025-91	RES, CHIP	100	5%	1/10W
R493	1-216-025-91	RES, CHIP	100	5%	1/10W
R494	1-216-049-91	RES, CHIP	1K	5%	1/10W
R495	1-216-049-91	RES, CHIP	1K	5%	1/10W
R496	1-216-025-91	RES, CHIP	100	5%	1/10W
R497	1-216-025-91	RES, CHIP	100	5%	1/10W
R498	1-216-049-91	RES, CHIP	1K	5%	1/10W
R499	1-216-049-91	RES, CHIP	1K	5%	1/10W
R500	1-216-025-91	RES, CHIP	100	5%	1/10W
R501	1-216-025-91	RES, CHIP	100	5%	1/10W
R502	1-216-049-91	RES, CHIP	1K	5%	1/10W
R504	1-216-085-00	METAL CHIP	33K	5%	1/10W
R505	1-216-085-00	METAL CHIP	33K	5%	1/10W
R506	1-259-420-11	CARBON	470	5%	1/6W
R507	1-259-420-11	CARBON	470	5%	1/6W
R508	1-259-420-11	CARBON	470	5%	1/6W
R509	1-259-420-11	CARBON	470	5%	1/6W
R510	1-216-085-00	METAL CHIP	33K	5%	1/10W
R511	1-216-077-00	METAL CHIP	15K	5%	1/10W
R512	1-216-077-00	METAL CHIP	15K	5%	1/10W
R513	1-216-085-00	METAL CHIP	33K	5%	1/10W
R514	1-216-025-91	RES, CHIP	100	5%	1/10W
R515	1-216-025-91	RES, CHIP	100	5%	1/10W
R516	1-216-049-91	RES, CHIP	1K	5%	1/10W
R517	1-216-049-91	RES, CHIP	1K	5%	1/10W
R519	1-259-440-11	CARBON	3.3K	5%	1/6W
R520	1-259-404-11	CARBON	100	5%	1/6W
R521	1-259-440-11	CARBON	3.3K	5%	1/6W
R523	1-259-404-11	CARBON	100	5%	1/6W
R524	1-259-466-11	CARBON	39K	5%	1/6W
R525	1-259-404-11	CARBON	100	5%	1/6W
R526	1-216-081-00	METAL CHIP	22K	5%	1/10W
R531	1-216-097-91	RES, CHIP	100K	5%	1/10W
R532	1-216-097-91	RES, CHIP	100K	5%	1/10W
R533	1-216-097-91	RES, CHIP	100K	5%	1/10W
R534	1-216-097-91	RES, CHIP	100K	5%	1/10W
R536	1-216-295-91	SHORT	0		
R538	1-216-295-91	SHORT	0		
R539	1-216-295-91	SHORT	0		
R540	1-216-295-91	SHORT	0		
R542	1-259-445-11	CARBON	5.1K	5%	1/6W
R543	1-259-445-11	CARBON	5.1K	5%	1/6W
R544	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R545	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R546	1-216-085-00	METAL CHIP	33K	5%	1/10W
R547	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R548	1-259-445-11	CARBON	5.1K	5%	1/6W
R549	1-259-445-11	CARBON	5.1K	5%	1/6W
R550	1-216-081-00	METAL CHIP	22K	5%	1/10W
R552	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R553	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R556	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R557	1-216-066-00	METAL CHIP	5.1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
*	A-6065-355-A	ER-4 BOARD, COMPLETE (S525D)			
*	A-6065-249-A	ER-5 BOARD, COMPLETE (S725D)			
		**********************			
					(Ref. No. 2,000 Series)
		< CAPACITOR >			
C901	1-104-664-11	ELECT	47uF	20%	16V
C902	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C903	1-104-664-11	ELECT	47uF	20%	16V
C904	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C905	1-104-664-11	ELECT	47uF	20%	16V
C906	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C907	1-104-664-11	ELECT	47uF	20%	16V
C908	1-128-551-11	ELECT	22uF	20%	25V
C909	1-128-551-11	ELECT	22uF	20%	25V
C910	1-128-551-11	ELECT	22uF	20%	25V
C911	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C912	1-128-551-11	ELECT	22uF	20%	25V
C913	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C914	1-126-935-11	ELECT	470uF	20%	6.3V
C915	1-128-551-11	ELECT	22uF	20%	25V
C916	1-126-935-11	ELECT	470uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C917	1-128-551-11	ELECT	22uF	20%	25V
C918	1-126-935-11	ELECT	470uF	20%	6.3V
C919	1-128-551-11	ELECT	22uF	20%	25V
C920	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C921	1-128-551-11	ELECT	22uF	20%	25V
C922	1-128-551-11	ELECT	22uF	20%	25V
C923	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C924	1-126-935-11	ELECT	470uF	20%	6.3V
C926	1-104-664-11	ELECT	47uF	20%	16V
C927	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C938	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C939	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C940	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C941	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C942	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C943	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C944	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C945	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C950	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C951	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C962	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C963	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C972	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C973	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C974	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C975	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C976	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C977	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C978	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
		< CONNECTOR >			
CN901	1-785-729-21	CONNECTOR, FFC/FPC 7P			
CN902	1-785-732-21	CONNECTOR, FFC/FPC 18P			
CN903	1-251-780-11	SOCKET, PIN (21P) (EURO AV2)			
CN904	1-251-780-11	SOCKET, PIN (21P) (EURO AV1 (RGB)-TV)			
		< DIODE >			
D901	8-719-988-61	DIODE 1SS355TE-17			
D902	8-719-988-61	DIODE 1SS355TE-17			
D903	8-719-988-61	DIODE 1SS355TE-17			
D904	8-719-988-61	DIODE 1SS355TE-17			
D905	8-719-988-61	DIODE 1SS355TE-17			
D906	8-719-988-61	DIODE 1SS355TE-17			
D907	8-719-988-61	DIODE 1SS355TE-17 (S725D)			
D908	8-719-071-15	DIODE HZM6.8ZWA1TL			
D910	8-719-988-61	DIODE 1SS355TE-17 (S725D)			
D915	8-719-071-15	DIODE HZM6.8ZWA1TL			
D917	8-719-071-15	DIODE HZM6.8ZWA1TL			
D918	8-719-071-15	DIODE HZM6.8ZWA1TL			
D919	8-719-071-15	DIODE HZM6.8ZWA1TL			
D920	8-719-071-15	DIODE HZM6.8ZWA1TL			
D921	8-719-071-15	DIODE HZM6.8ZWA1TL			
D922	8-719-071-15	DIODE HZM6.8ZWA1TL			
D923	8-719-071-15	DIODE HZM6.8ZWA1TL			
D924	8-719-071-15	DIODE HZM6.8ZWA1TL			
D926	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D927	8-719-977-40	DIODE UDZ-TE-17-13B			
D929	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D930	8-719-977-40	DIODE UDZ-TE-17-13B			

Ref. No.	Part No.	Description		Remark
		< EARTH TERMINAL >		
* ET901	1-537-738-21	TERMINAL, EARTH		
		< FERRITE BEAD >		
FB901	1-414-553-11	FERRITE	0uH	
FB902	1-414-553-11	FERRITE	0uH	
FB903	1-414-553-11	FERRITE	0uH	
FB904	1-414-553-11	FERRITE	0uH	
FB905	1-414-553-11	FERRITE	0uH	
FB906	1-414-553-11	FERRITE	0uH	
FB907	1-414-553-11	FERRITE	0uH	
FB908	1-414-553-11	FERRITE	0uH	
FB909	1-414-553-11	FERRITE	0uH	
FB910	1-414-553-11	FERRITE	0uH	
FB911	1-414-553-11	FERRITE	0uH	
FB912	1-414-553-11	FERRITE	0uH	
FB913	1-414-553-11	FERRITE	0uH	
FB914	1-414-553-11	FERRITE	0uH	
FB915	1-414-553-11	FERRITE	0uH	
FB916	1-414-553-11	FERRITE	0uH	
FB917	1-414-553-11	FERRITE	0uH	
FB918	1-414-553-11	FERRITE	0uH	
		< IC >		
IC901	8-759-563-79	IC BA7660F-E2 (S525D)		
IC901	8-759-522-11	IC BA7660FS-E2 (S725D)		
IC902	8-759-432-78	IC MM1111XFBE		
IC903	8-759-567-33	IC MM1225XFBE		
		< JUMPER RESISTOR >		
JR900	1-216-296-91	SHORT	0 (S525D)	
JR901	1-216-296-91	SHORT	0 (S525D)	
JR902	1-216-295-91	SHORT	0 (S525D)	
JR903	1-216-296-91	SHORT	0 (S525D)	
JR904	1-216-296-91	SHORT	0 (S525D)	
JR905	1-216-295-91	SHORT	0 (S525D)	
JR906	1-216-295-91	SHORT	0 (S525D)	
JR907	1-216-296-91	SHORT	0 (S525D)	
JR908	1-216-296-91	SHORT	0 (S525D)	
JR909	1-216-296-91	SHORT	0 (S525D)	
JR910	1-216-295-91	SHORT	0 (S525D)	
JR911	1-216-296-91	SHORT	0 (S525D)	
JR912	1-216-296-91	SHORT	0 (S525D)	
JR913	1-216-295-91	SHORT	0 (S525D)	
JR914	1-216-296-91	SHORT	0 (S525D)	
JR915	1-216-296-91	SHORT	0 (S525D)	
JR916	1-216-296-91	SHORT	0 (S525D)	
JR917	1-216-295-91	SHORT	0 (S525D)	
JR918	1-216-296-91	SHORT	0 (S525D)	
JR919	1-216-296-91	SHORT	0 (S525D)	
JR920	1-216-296-91	SHORT	0 (S525D)	
JR921	1-216-295-91	SHORT	0 (S525D)	
JR922	1-216-295-91	SHORT	0 (S525D)	
JR923	1-216-296-91	SHORT	0 (S525D)	
JR924	1-216-295-91	SHORT	0 (S525D)	
JR925	1-216-296-91	SHORT	0 (S525D)	
JR926	1-216-296-91	SHORT	0 (S525D)	
JR927	1-216-295-91	SHORT	0 (S525D)	
JR928	1-216-296-91	SHORT	0 (S525D)	
JR929	1-216-296-91	SHORT	0 (S525D)	

Ref. No.	Part No.	Description			Remark
JR930	1-216-296-91	SHORT	0 (S525D)		
JR932	1-216-296-91	SHORT	0 (S525D)		
JR933	1-216-296-91	SHORT	0 (S525D)		
JR934	1-216-296-91	SHORT	0 (S525D)		
JR935	1-216-296-91	SHORT	0 (S525D)		
JR936	1-216-295-91	SHORT	0 (S525D)		
JR937	1-216-295-91	SHORT	0 (S525D)		
		< COIL >			
L901	1-412-064-11	INDUCTOR CHIP	100uH		
L902	1-412-064-11	INDUCTOR CHIP	100uH		
L903	1-412-058-11	INDUCTOR CHIP	10uH		
L904	1-412-064-11	INDUCTOR CHIP	100uH		
L905	1-412-953-11	INDUCTOR	15uH		
L906	1-412-953-11	INDUCTOR	15uH		
L907	1-412-953-11	INDUCTOR	15uH		
		< TRANSISTOR >			
Q901	8-729-421-19	TRANSISTOR	UN2213		
Q902	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q903	8-729-424-08	TRANSISTOR	UN2111		
Q904	8-729-421-19	TRANSISTOR	UN2213		
Q905	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q906	8-729-421-19	TRANSISTOR	UN2213		
Q907	8-729-424-08	TRANSISTOR	UN2111		
Q908	8-729-421-22	TRANSISTOR	UN2211		
Q909	8-729-421-19	TRANSISTOR	UN2213		
Q910	8-729-424-08	TRANSISTOR	UN2111		
Q912	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q913	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q914	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q915	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q916	8-729-422-27	TRANSISTOR	2SD601A-Q		
Q917	8-729-421-19	TRANSISTOR	UN2213 (S725D)		
Q918	8-729-421-19	TRANSISTOR	UN2213 (S725D)		
		< RESISTOR >			
R901	1-216-113-00	METAL CHIP	470K	5%	1/10W
R902	1-216-095-00	METAL CHIP	82K	5%	1/10W
R903	1-216-113-00	METAL CHIP	470K	5%	1/10W
R904	1-216-095-00	METAL CHIP	82K	5%	1/10W
R905	1-216-113-00	METAL CHIP	470K	5%	1/10W
R906	1-216-095-00	METAL CHIP	82K	5%	1/10W
R907	1-216-089-91	RES, CHIP	47K	5%	1/10W
R908	1-216-105-91	RES, CHIP	220K	5%	1/10W
R909	1-216-039-00	METAL CHIP	390	5%	1/10W
R910	1-216-039-00	METAL CHIP	390	5%	1/10W
R911	1-216-039-00	METAL CHIP	390	5%	1/10W
R912	1-216-039-00	METAL CHIP	390	5%	1/10W
R913	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R914	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R915	1-216-045-00	METAL CHIP	680	5%	1/10W
R916	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R917	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R918	1-216-021-00	METAL CHIP	68	5%	1/10W
R920	1-216-049-91	RES, CHIP	1K	5%	1/10W
R922	1-216-021-00	METAL CHIP	68	5%	1/10W
R923	1-216-049-91	RES, CHIP	1K	5%	1/10W
R924	1-216-049-91	RES, CHIP	1K	5%	1/10W
R925	1-216-049-91	RES, CHIP	1K	5%	1/10W
R926	1-216-049-91	RES, CHIP	1K	5%	1/10W
R927	1-216-020-00	METAL CHIP	62	5%	1/10W
R928	1-216-021-00	METAL CHIP	68	5%	1/10W
R929	1-216-021-00	METAL CHIP	68	5%	1/10W
R930	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R931	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R932	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R933	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R934	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R938	1-216-025-91	RES, CHIP	100	5%	1/10W
R939	1-216-017-91	RES, CHIP	47	5%	1/10W
R940	1-216-042-00	METAL CHIP	510	5%	1/10W (S525D)
R940	1-216-047-91	RES, CHIP	820	5%	1/10W (S725D)
R941	1-216-042-00	METAL CHIP	510	5%	1/10W (S525D)
R941	1-216-047-91	RES, CHIP	820	5%	1/10W (S725D)
R942	1-216-042-00	METAL CHIP	510	5%	1/10W (S525D)
R942	1-216-047-91	RES, CHIP	820	5%	1/10W (S725D)
R943	1-216-073-00	METAL CHIP	10K	5%	1/10W
R944	1-216-073-00	METAL CHIP	10K	5%	1/10W
R945	1-216-081-00	METAL CHIP	22K	5%	1/10W (S725D)
R946	1-216-065-91	RES, CHIP	4.7K	5%	1/10W (S725D)
R948	1-216-022-00	METAL CHIP	75	5%	1/10W
		< RELAY >			
RY901	1-755-041-11	RELAY			
RY902	1-755-041-11	RELAY			
RY903	1-755-041-11	RELAY			
RY904	1-755-041-11	RELAY			
RY905	1-755-041-11	RELAY			

Ref. No.	Part No.	Description			Remark
*	A-6065-227-A	FL-98 BOARD, COMPLETE (S525D)			
*	A-6065-250-A	FL-100 BOARD, COMPLETE (S725D)			
		**********************			
					(Ref. No. 2,000 Series)
	3-053-487-01	HOLDER, FL TUBE			
		< CAPACITOR >			
C201	1-124-259-11	ELECT	4.7uF	20%	16V
C203	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C205	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C209	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V (S725D)
C210	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V (S725D)
C211	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C212	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C213	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C214	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C215	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C216	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C219	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C220	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C221	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description			Remark
C222	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C223	1-128-131-11	ELECT	22uF	20%	50V
C235	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C236	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C237	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C238	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C239	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C240	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C241	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C242	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C243	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
		< CONNECTOR >			
CN201	1-568-666-21	CONNECTOR, BOARD TO BOARD 12P			
CN202	1-785-731-21	CONNECTOR, FFC/FPC 17P			
CN203	1-785-730-21	CONNECTOR, FFC/FPC 9P			
		< DIODE >			
D202	8-719-988-61	DIODE 1SS355TE-17			
D203	8-719-069-45	DIODE SELU5E23C-TP15 (MULTI CHANNEL)			
D204	8-719-056-06	DIODE SLR-342DCT31 (JOG)			
D206	8-719-018-12	DIODE MA8330-L-TX			
D207	8-719-422-67	DIODE MA8062-H-TX			
		< EARTH TERMINAL >			
* ET201	1-537-738-21	TERMINAL, EARTH (S725D)			
		< FERRITE BEAD >			
FB201	1-414-135-11	FERRITE	0uH		
		< IC >			
IC201	8-759-574-86	IC M38B57MCH-E206FP			
IC202	8-759-326-78	IC PST9140NL			
		< JUMPER RESISTOR >			
JR201	1-216-295-91	SHORT	0 (S525D)		
JR202	1-216-295-91	SHORT	0 (S525D)		
JR203	1-216-295-91	SHORT	0 (S525D)		
JR204	1-216-295-91	SHORT	0 (S525D)		
JR205	1-216-296-91	SHORT	0 (S525D)		
JR206	1-216-295-91	SHORT	0 (S525D)		
JR207	1-216-296-91	SHORT	0 (S525D)		
JR208	1-216-295-91	SHORT	0 (S525D)		
JR209	1-216-296-91	SHORT	0 (S525D)		
JR210	1-216-296-91	SHORT	0 (S525D)		
JR211	1-216-295-91	SHORT	0 (S525D)		
JR212	1-216-296-91	SHORT	0 (S525D)		
JR214	1-216-296-91	SHORT	0 (S525D)		
JR216	1-216-296-91	SHORT	0 (S525D)		
JR217	1-216-296-91	SHORT	0 (S525D)		
JR218	1-216-295-91	SHORT	0 (S525D)		
JR219	1-216-295-91	SHORT	0 (S525D)		
JR220	1-216-295-91	SHORT	0 (S525D)		
JR224	1-216-296-91	SHORT	0 (S525D)		
JR226	1-216-295-91	SHORT	0 (S525D)		
JR229	1-216-296-91	SHORT	0 (S525D)		
JR230	1-216-296-91	SHORT	0 (S525D)		
JR231	1-216-295-91	SHORT	0 (S525D)		
JR233	1-216-296-91	SHORT	0 (S525D)		
JR234	1-216-295-91	SHORT	0 (S525D)		

Ref. No.	Part No.	Description			Remark
JR235	1-216-295-91	SHORT	0 (S525D)		
JR236	1-216-295-91	SHORT	0 (S525D)		
JR237	1-216-295-91	SHORT	0 (S525D)		
JR238	1-216-296-91	SHORT	0 (S525D)		
JR244	1-216-295-91	SHORT	0 (S525D)		
JR249	1-216-296-91	SHORT	0 (S525D)		
		< FLUORESCENT INDICATOR >			
ND201	1-517-836-11	INDICATOR TUBE, FLUORESCENT			
		< TRANSISTOR >			
Q201	8-729-804-41	TRANSISTOR 2SB1122-S			
		< RESISTOR >			
R201	1-208-806-11	RES, CHIP	10K	0.50%	1/10W
R202	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R203	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R204	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R205	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R206	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R207	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R208	1-216-077-00	METAL CHIP	15K	5%	1/10W
R209	1-216-091-00	METAL CHIP	56K	5%	1/10W (S725D)
R211	1-208-806-11	RES, CHIP	10K	0.50%	1/10W
R212	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R213	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R214	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R215	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R216	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R217	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R218	1-216-077-00	METAL CHIP	15K	5%	1/10W
R221	1-208-806-11	RES, CHIP	10K	0.50%	1/10W
R222	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R223	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R224	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R225	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R226	1-216-025-91	RES, CHIP	100	5%	1/10W
R227	1-216-025-91	RES, CHIP	100	5%	1/10W
R229	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R230	1-216-073-00	METAL CHIP	10K	5%	1/10W
R231	1-216-025-91	RES, CHIP	100	5%	1/10W
R232	1-216-025-91	RES, CHIP	100	5%	1/10W
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W
R243	1-216-073-00	METAL CHIP	10K	5%	1/10W
R244	1-216-073-00	METAL CHIP	10K	5%	1/10W
R247	1-216-073-00	METAL CHIP	10K	5%	1/10W
R248	1-216-073-00	METAL CHIP	10K	5%	1/10W
R249	1-216-073-00	METAL CHIP	10K	5%	1/10W
R250	1-216-073-00	METAL CHIP	10K	5%	1/10W
R251	1-216-049-91	RES, CHIP	1K	5%	1/10W
R252	1-216-049-91	RES, CHIP	1K	5%	1/10W
R253	1-216-073-00	METAL CHIP	10K	5%	1/10W
R254	1-216-073-00	METAL CHIP	10K	5%	1/10W
R255	1-216-073-00	METAL CHIP	10K	5%	1/10W
R256	1-216-073-00	METAL CHIP	10K	5%	1/10W
R257	1-216-025-91	RES, CHIP	100	5%	1/10W
R258	1-216-025-91	RES, CHIP	100	5%	1/10W
R259	1-216-025-91	RES, CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R260	1-216-025-91	RES, CHIP	100	5%	1/10W
R261	1-216-025-91	RES, CHIP	100	5%	1/10W
R262	1-216-025-91	RES, CHIP	100	5%	1/10W
R263	1-216-073-00	METAL CHIP	10K	5%	1/10W
R264	1-216-073-00	METAL CHIP	10K	5%	1/10W
R266	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (S725D)
R267	1-216-049-91	RES, CHIP	1K	5%	1/10W
R268	1-216-089-91	RES, CHIP	47K	5%	1/10W
R270	1-216-073-00	METAL CHIP	10K	5%	1/10W
R271	1-216-073-00	METAL CHIP	10K	5%	1/10W
R272	1-216-065-91	RES, CHIP	4.7K	5%	1/10W
R273	1-216-025-91	RES, CHIP	100	5%	1/10W
R274	1-216-097-91	RES, CHIP	100K	5%	1/10W
R275	1-216-073-00	METAL CHIP	10K	5%	1/10W
R276	1-216-073-00	METAL CHIP	10K	5%	1/10W
R277	1-216-073-00	METAL CHIP	10K	5%	1/10W
R278	1-216-073-00	METAL CHIP	10K	5%	1/10W
R279	1-216-073-00	METAL CHIP	10K	5%	1/10W
R284	1-216-073-00	METAL CHIP	10K	5%	1/10W
R285	1-216-045-00	METAL CHIP	680	5%	1/10W
R286	1-216-073-00	METAL CHIP	10K	5%	1/10W
R287	1-216-037-00	METAL CHIP	330	5%	1/10W
R288	1-216-073-00	METAL CHIP	10K	5%	1/10W
R289	1-216-073-00	METAL CHIP	10K	5%	1/10W
R298	1-216-025-91	RES, CHIP	100	5%	1/10W (S725D)
R299	1-216-025-91	RES, CHIP	100	5%	1/10W (S725D)
		< SWITCH >			
S201	1-771-349-21	SWITCH, KEYBOARD (■)			
S202	1-771-349-21	SWITCH, KEYBOARD (❚❚)			
S208	1-771-349-21	SWITCH, KEYBOARD (JOG)			
S212	1-771-349-21	SWITCH, KEYBOARD (OPEN/CLOSE ⏏)			
S213	1-771-349-21	SWITCH, KEYBOARD (►)			
S214	1-771-349-21	SWITCH, KEYBOARD (TITLE)			
S215	1-771-349-21	SWITCH, KEYBOARD (DVD MENU)			
S216	1-771-349-21	SWITCH, KEYBOARD (RETURN)			
S217	1-771-349-21	SWITCH, KEYBOARD (PREV ⏮) (S525D)			
S217	1-771-349-21	SWITCH, KEYBOARD (◀◀ SEARCH) (S725D)			
S218	1-771-349-21	SWITCH, KEYBOARD (⏭ NEXT) (S525D)			
S218	1-771-349-21	SWITCH, KEYBOARD (SEARCH ▶▶) (S725D)			
S221	1-771-349-21	SWITCH, KEYBOARD (REREAT)			
S222	1-771-349-21	SWITCH, KEYBOARD (CLEAR)			
S223	1-771-349-21	SWITCH, KEYBOARD (PROGRAM)			
S224	1-771-349-21	SWITCH, KEYBOARD (SHUFFLE)			
S230	1-475-235-21	ENCODER, ROTARY (PREV ⏮ ⏭ NEXT)			(S725D)
		< VIBRATOR >			
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			

Ref. No.	Part No.	Description			Remark
*	A-6065-228-A	FR-147 BOARD, COMPLETE (S525D)			
*	A-6065-251-A	FR-149 BOARD, COMPLETE (S725D)			
		***********************			
		(Ref. No. 4,000 Series)			
		< CAPACITOR >			
C001	1-124-234-00	ELECT	22uF	20%	16V
C002	1-137-150-11	FILM	0.01uF	5%	100V
C003	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C004	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C005	1-128-131-11	ELECT	22uF	20%	50V
C051	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN001	1-506-485-11	PIN, CONNECTOR 6P			
CN002	1-568-672-11	CONNECTOR, BOARD TO BOARD 12P			
CN003	1-785-712-11	CONNECTOR, BOARD TO BOARD 4P			
		< DIODE >			
D001	8-719-041-97	DIODE MA113-(TX)			
D002	8-719-041-97	DIODE MA113-(TX)			
D003	8-719-041-97	DIODE MA113-(TX)			
D004	8-719-041-97	DIODE MA113-(TX)			
D071	8-719-064-11	DIODE SPR-325MVW (ON/STANDBY)			
		< FERRITE BEAD >			
FB001	1-414-135-11	FERRITE	0uH		
FB002	1-414-135-11	FERRITE	0uH		
FB004	1-469-324-21	FERRITE	0uH		
		< IC >			
IC051	8-749-011-22	IC GP1U27X			
		< COIL >			
L001	1-408-978-21	INDUCTOR	47uH		
		< TRANSISTOR >			
Q001	8-729-808-41	TRANSISTOR 2SD1624-S			
Q002	8-729-808-41	TRANSISTOR 2SD1624-S			
		< RESISTOR >			
R002	1-216-073-00	METAL CHIP	10K	5%	1/10W
R003	1-216-073-00	METAL CHIP	10K	5%	1/10W
R071	1-216-047-91	RES, CHIP	820	5%	1/10W
R072	1-216-037-00	METAL CHIP	330	5%	1/10W
		< SWITCH >			
S071	1-771-349-21	SWITCH, KEYBOARD (I/⏻)			
		< TRANSFORMER >			
T001	1-433-748-11	TRANSFORMER, DC-DC CONVERTER			

Ref. No.	Part No.	Description			Remark
*	A-6065-229-A	HP-108 BOARD, COMPLETE (S525D)			
*	A-6065-252-A	HP-110 BOARD, COMPLETE (S725D)			
		***********************			
		(Ref. No. 2,000 Series)			
		< CAPACITOR >			
C701	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V (S725D)
C701	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V (S525D)
C702	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V (S725D)
C702	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V (S525D)

	Ref. No.	Part No.	Description			Remark
			< CONNECTOR >			
*	CN701	1-564-013-11	PIN, CONNECTOR 3P			
			< DIODE >			
	D701	8-719-071-15	DIODE HZM6.8ZWA1TL			
	D702	8-719-071-15	DIODE HZM6.8ZWA1TL			
			< FERRITE BEAD >			
	FB701	1-414-135-11	FERRITE	0uH		
	FB702	1-414-135-11	FERRITE	0uH		
	FB703	1-414-135-11	FERRITE	0uH		
			< JACK >			
	J701	1-785-505-41	JACK, LARGE TYPE (PHONES) (S725D)			
	J701	1-785-505-31	JACK, LARGE TYPE (PHONES) (S525D)			
			< JUMPER RESISTOR >			
	JR701	1-216-295-91	SHORT	0 (S525D)		
			< VARIABLE RESISTOR >			
	RV701	1-225-738-11	RES, VAR, CARBON 500/500 (LEVEL)			

	Ref. No.	Part No.	Description			Remark
*		A-6065-388-A	MB-85 BOARD, COMPLETE (S525D)			
*		A-6065-387-A	MB-85 BOARD, COMPLETE (S725D)			
			***********************			
			(Ref. No. 1,000 Series)			
			< CAPACITOR >			
	C001	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C002	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
	C003	1-126-246-11	ELECT CHIP	220uF	20%	4V
	C004	1-126-204-11	ELECT CHIP	47uF	20%	16V
	C005	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
	C007	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C008	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C010	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C011	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C012	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C013	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C015	1-126-246-11	ELECT CHIP	220uF	20%	4V
	C016	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C017	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C018	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C019	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C201	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
	C202	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
	C203	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C204	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C211	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C212	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C213	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C304	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
	C307	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C309	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
	C310	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C312	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C313	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C314	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C315	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C316	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C319	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C321	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
	C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C324	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C325	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
	C327	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C331	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C334	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C337	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C338	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C341	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C344	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
	C401	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C402	1-126-209-11	ELECT CHIP	100uF	20%	4V
	C403	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
	C404	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
	C405	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C406	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C408	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C410	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C411	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C414	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C415	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C420	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C422	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C425	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C426	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C428	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C432	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C433	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C434	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C436	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C438	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C439	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C440	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
	C441	1-126-209-11	ELECT CHIP	100uF	20%	4V
	C443	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (S725D)
	C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
	C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C512	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (S725D)
C514	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (S725D)
C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (S725D)
C516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (S725D)
C517	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (S725D)
C601	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C604	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C605	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C607	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C608	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C703	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C704	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C705	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C706	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C707	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C708	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C709	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C710	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C711	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C712	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C713	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C714	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C715	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C717	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C801	1-126-204-11	ELECT CHIP	47uF	20%	16V
C802	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C803	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C805	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C806	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C807	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C808	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C809	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C810	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C811	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C812	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C813	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C814	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C815	1-110-666-11	ELECT CHIP	22uF	20%	6.3V
C816	1-104-601-11	ELECT CHIP	10uF	20%	10V
C817	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C818	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C819	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C820	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C821	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C822	1-126-204-11	ELECT CHIP	47uF	20%	16V
C823	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C824	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C825	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C830	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C831	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C832	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C833	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C834	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C835	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C836	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C837	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C904	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C905	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C906	1-127-950-21	FILM CHIP	0.01uF	5%	16.5V (S725D)
C906	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (S525D)
C907	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C908	1-128-391-11	ELECT CHIP	330uF	20%	6.3V (S525D)
C909	1-127-950-21	FILM CHIP	0.01uF	5%	16.5V (S725D)
C909	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (S525D)
C910	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C911	1-127-950-21	FILM CHIP	0.01uF	5%	16.5V (S725D)
C911	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V (S525D)
C912	1-127-516-11	ELECT	220uF	20%	10V (S725D)
C913	1-127-950-21	FILM CHIP	0.01uF	5%	16.5V (S725D)
C913	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (S525D)
C914	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C916	1-127-950-21	FILM CHIP	0.01uF	5%	16.5V (S725D)
C916	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V (S525D)
C922	1-127-950-21	FILM CHIP	0.01uF	5%	16.5V (S725D)
C922	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V (S525D)
C923	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C924	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C925	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C926	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C927	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C928	1-128-391-11	ELECT CHIP	330uF	20%	6.3V
C929	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C931	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C932	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C933	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C934	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C935	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
C937	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C939	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C940	1-125-822-11	TANTAL. CHIP	10uF	20%	10V
		< CONNECTOR >			
CN001	1-785-728-21	PIN (PC BOARD), CONNECTOR 7P			
CN002	1-779-936-11	CONNECTOR, FFC/FPC 18P			
CN003	1-779-936-11	CONNECTOR, FFC/FPC 18P			
CN004	1-778-772-11	CONNECTOR, FFC/FPC 7P			
CN005	1-784-327-11	CONNECTOR, FFC/FPC 28P			

MB-85

Ref. No.	Part No.	Description			Remark
CN006	1-774-768-11	CONNECTOR, FFC/FPC 17P			
CN007	1-778-274-11	CONNECTOR, FFC/FPC 13P			
CN010	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
CN011	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
* CN012	1-573-768-21	PIN, CONNECTOR (1.5mm) (SMD) 5P			
		< DIODE >			
D701	8-719-988-61	DIODE 1SS355TE-17			
D801	8-719-941-09	DIODE DAP202U			
D802	8-719-988-61	DIODE 1SS355TE-17			
D803	8-719-941-09	DIODE DAP202U			
D804	8-719-941-86	DIODE DAN202U			
D805	8-719-941-86	DIODE DAN202U			
D806	8-719-988-61	DIODE 1SS355TE-17			
D807	8-719-988-61	DIODE 1SS355TE-17			
		< FERRITE BEAD >			
FB001	1-469-324-21	FERRITE	0uH		
FB002	1-469-324-21	FERRITE	0uH		
FB003	1-469-324-21	FERRITE	0uH		
FB004	1-469-324-21	FERRITE	0uH		
FB005	1-469-324-21	FERRITE	0uH		
FB006	1-469-324-21	FERRITE	0uH		
FB007	1-469-324-21	FERRITE	0uH		
FB008	1-469-324-21	FERRITE	0uH		
FB009	1-469-116-21	FERRITE	0uH		
FB010	1-469-116-21	FERRITE	0uH		
FB011	1-469-116-21	FERRITE	0uH		
FB012	1-469-116-21	FERRITE	0uH		
FB013	1-469-116-21	FERRITE	0uH		
FB014	1-469-116-21	FERRITE	0uH		
FB015	1-469-116-21	FERRITE	0uH		
FB016	1-216-801-11	METAL CHIP	22	5%	1/16W
FB017	1-469-116-21	FERRITE	0uH		
FB018	1-469-116-21	FERRITE	0uH		
FB019	1-469-116-21	FERRITE	0uH		
FB020	1-469-116-21	FERRITE	0uH		
FB021	1-469-116-21	FERRITE	0uH		
FB022	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB024	1-469-116-21	FERRITE	0uH		
FB026	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB028	1-469-116-21	FERRITE	0uH		
FB029	1-469-324-21	FERRITE	0uH		
FB030	1-469-116-21	FERRITE	0uH		
FB031	1-469-116-21	FERRITE	0uH		
FB032	1-469-116-21	FERRITE	0uH		
FB033	1-469-116-21	FERRITE	0uH		
FB035	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB037	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB040	1-469-116-21	FERRITE	0uH		
FB043	1-500-283-11	INDUCTOR CHIP	0uH		
FB047	1-469-116-21	FERRITE	0uH		
FB049	1-469-116-21	FERRITE	0uH		
FB051	1-469-116-21	FERRITE	0uH		
FB053	1-500-283-11	INDUCTOR CHIP	0uH		
FB054	1-500-283-11	INDUCTOR CHIP	0uH		
FB055	1-500-283-11	INDUCTOR CHIP	0uH		
FB056	1-500-283-11	INDUCTOR CHIP	0uH		
FB058	1-500-283-11	INDUCTOR CHIP	0uH		
FB060	1-500-283-11	INDUCTOR CHIP	0uH		
FB061	1-469-116-21	FERRITE	0uH		
FB063	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB065	1-469-116-21	FERRITE	0uH		
FB067	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB069	1-469-116-21	FERRITE	0uH		
FB071	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB073	1-469-116-21	FERRITE	0uH		
FB075	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
FB077	1-469-116-21	FERRITE	0uH		
FB078	1-216-801-11	METAL CHIP	22	5%	1/16W
FB080	1-216-801-11	METAL CHIP	22	5%	1/16W
FB081	1-216-801-11	METAL CHIP	22	5%	1/16W
FB083	1-216-801-11	METAL CHIP	22	5%	1/16W
FB084	1-216-801-11	METAL CHIP	22	5%	1/16W
FB085	1-216-801-11	METAL CHIP	22	5%	1/16W
FB086	1-216-801-11	METAL CHIP	22	5%	1/16W (S725D)
FB087	1-216-801-11	METAL CHIP	22	5%	1/16W
FB088	1-216-801-11	METAL CHIP	22	5%	1/16W
FB105	1-469-324-21	FERRITE	0uH		
FB106	1-469-324-21	FERRITE	0uH		
		< FILTER >			
FL001	1-234-177-21	FILTER, CHIP EMI			
FL002	1-234-177-21	FILTER, CHIP EMI			
FL003	1-233-893-21	FILTER, CHIP EMI			
FL004	1-233-893-21	FILTER, CHIP EMI			
FL005	1-234-177-21	FILTER, CHIP EMI			
FL006	1-234-177-21	FILTER, CHIP EMI			
FL008	1-234-177-21	FILTER, CHIP EMI			
FL009	1-234-177-21	FILTER, CHIP EMI			
FL010	1-234-177-21	FILTER, CHIP EMI			
FL014	1-234-177-21	FILTER, CHIP EMI			
FL015	1-234-177-21	FILTER, CHIP EMI			
FL016	1-234-177-21	FILTER, CHIP EMI			
FL202	1-234-177-21	FILTER, CHIP EMI			
FL203	1-234-177-21	FILTER, CHIP EMI			
FL204	1-234-177-21	FILTER, CHIP EMI			
FL205	1-234-177-21	FILTER, CHIP EMI			
FL301	1-234-177-21	FILTER, CHIP EMI			
FL302	1-234-177-21	FILTER, CHIP EMI			
FL303	1-234-177-21	FILTER, CHIP EMI			
FL401	1-234-177-21	FILTER, CHIP EMI			
FL402	1-234-177-21	FILTER, CHIP EMI			
FL403	1-234-177-21	FILTER, CHIP EMI			
FL404	1-234-177-21	FILTER, CHIP EMI			
FL405	1-234-177-21	FILTER, CHIP EMI			
FL501	1-234-177-21	FILTER, CHIP EMI (S725D)			
FL502	1-234-177-21	FILTER, CHIP EMI			
FL503	1-234-177-21	FILTER, CHIP EMI (S725D)			
FL601	1-234-177-21	FILTER, CHIP EMI			
FL602	1-234-177-21	FILTER, CHIP EMI (S725D)			
FL701	1-234-177-21	FILTER, CHIP EMI			
FL904	1-234-177-21	FILTER, CHIP EMI			
		< IC >			
IC001	8-759-567-31	IC PLL1700E/2K			
IC003	8-759-531-92	IC TC7WH04FU (TE12R)			
IC004	8-759-531-92	IC TC7WH04FU (TE12R)			
IC005	8-759-486-55	IC NJM2370U33-TE2			
IC201	8-759-469-25	IC AK6440AF-E2			

Ref. No.	Part No.	Description				Remark
IC202	8-759-599-39	IC	MB91101APFV-G-BND			
IC203	8-759-580-60	IC	SN74AHCT08PWR			
IC204	8-759-573-65	IC	IDT71V016S20PHAU-TL			
IC206	8-759-652-96	IC	MR27V1602D-45MAZ060 (S725D)			
IC206	8-759-652-99	IC	MR27V1602D-48MAZ060 (S525D)			
IC207	8-759-427-92	IC	PST9126NL			
IC302	8-759-486-55	IC	NJM2370U33-TE2			
IC303	8-759-567-27	IC	CXD8784R			
IC304	8-759-567-35	IC	KM416V1200CT-L6T			
IC401	8-752-398-60	IC	CXD1930BQ			
IC402	8-759-567-34	IC	KM416S1020CT-G10T			
IC403	8-759-567-34	IC	KM416S1020CT-G10T			
IC404	8-759-486-55	IC	NJM2370U33-TE2			
IC501	8-752-400-43	IC	CXD1901AR			
IC502	8-752-390-12	IC	CXD1857Q (S725D)			
IC601	8-759-567-30	IC	CXD8788Q			
IC602	8-759-567-55	IC	KM29V16000AT-T (S725D)			
IC701	8-759-598-87	IC	CXD8791AQ			
IC702	8-759-337-40	IC	NJM2904V (TE2)			
IC801	8-759-522-13	IC	BA5981FP-E2			
IC802	8-759-567-26	IC	BA5983FP-E2			
IC803	8-759-338-78	IC	BA10324AFV-E2			
IC902	8-759-572-26	IC	CXD8799N-T2			
IC904	8-759-052-52	IC	L78M05T-FA			
IC905	8-759-572-26	IC	CXD8799N-T2			
IC906	8-759-572-26	IC	CXD8799N-T2			
IC907	8-759-572-26	IC	CXD8799N-T2			
		< COIL >				
L001	1-414-754-11	INDUCTOR	10uH			
L402	1-414-754-11	INDUCTOR	10uH			
		< TRANSISTOR >				
Q801	8-729-015-74	TRANSISTOR	UN5111-TX			
Q802	8-729-230-63	TRANSISTOR	2SC4116-YG			
Q803	8-729-230-63	TRANSISTOR	2SC4116-YG			
		< RESISTOR >				
R001	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R002	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R003	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R004	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R005	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R006	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R007	1-216-864-11	METAL CHIP	0	5%	1/16W	
R009	1-216-864-11	METAL CHIP	0	5%	1/16W	
R010	1-216-801-11	METAL CHIP	22	5%	1/16W	
R014	1-216-801-11	METAL CHIP	22	5%	1/16W	
R036	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R037	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R044	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R045	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R053	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R202	1-216-801-11	METAL CHIP	22	5%	1/16W	
R203	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R204	1-216-833-11	RES, CHIP	10K	5%	1/16W	
R205	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R206	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R207	1-216-833-11	RES, CHIP	10K	5%	1/16W	

Ref. No.	Part No.	Description			Remark
R212	1-216-813-11	METAL CHIP	220	5%	1/16W
R213	1-216-801-11	METAL CHIP	22	5%	1/16W
R217	1-216-833-11	RES, CHIP	10K	5%	1/16W
R222	1-216-833-11	RES, CHIP	10K	5%	1/16W
R223	1-216-833-11	RES, CHIP	10K	5%	1/16W
R225	1-216-833-11	RES, CHIP	10K	5%	1/16W
R226	1-216-833-11	RES, CHIP	10K	5%	1/16W
R227	1-216-813-11	METAL CHIP	220	5%	1/16W
R228	1-216-813-11	METAL CHIP	220	5%	1/16W
R229	1-216-813-11	METAL CHIP	220	5%	1/16W
R230	1-216-813-11	METAL CHIP	220	5%	1/16W
R231	1-216-813-11	METAL CHIP	220	5%	1/16W
R232	1-216-813-11	METAL CHIP	220	5%	1/16W
R235	1-216-864-11	METAL CHIP	0	5%	1/16W
R237	1-216-230-00	RES, CHIP	22K	5%	1/8W
R238	1-216-224-91	RES, CHIP	12K	5%	1/8W (S725D)
R238	1-216-238-91	RES, CHIP	47K	5%	1/8W (S525D)
R239	1-216-246-00	RES, CHIP	100K	5%	1/8W
R240	1-216-230-00	RES, CHIP	22K	5%	1/8W
R241	1-216-224-91	RES, CHIP	12K	5%	1/8W (S725D)
R241	1-216-238-91	RES, CHIP	47K	5%	1/8W (S525D)
R305	1-218-879-11	RES, CHIP	22K	0.50%	1/16W
R306	1-218-831-11	RES, CHIP	220	0.50%	1/16W
R307	1-218-883-11	RES, CHIP	33K	0.50%	1/16W
R308	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R309	1-216-838-11	METAL CHIP	27K	5%	1/16W
R310	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R313	1-216-833-11	RES, CHIP	10K	5%	1/16W
R314	1-216-833-11	RES, CHIP	10K	5%	1/16W
R315	1-216-833-11	RES, CHIP	10K	5%	1/16W
R316	1-218-855-11	RES, CHIP	2.2K	0.50%	1/16W
R317	1-218-871-11	RES, CHIP	10K	0.50%	1/16W
R318	1-216-849-11	METAL CHIP	220K	5%	1/16W
R319	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R320	1-218-853-11	RES, CHIP	1.8K	0.50%	1/16W
R321	1-218-847-11	RES, CHIP	1K	0.50%	1/16W
R322	1-218-871-11	RES, CHIP	10K	0.50%	1/16W
R323	1-216-833-11	RES, CHIP	10K	5%	1/16W
R324	1-216-833-11	RES, CHIP	10K	5%	1/16W
R325	1-216-833-11	RES, CHIP	10K	5%	1/16W
R326	1-216-833-11	RES, CHIP	10K	5%	1/16W
R327	1-216-833-11	RES, CHIP	10K	5%	1/16W
R328	1-216-833-11	RES, CHIP	10K	5%	1/16W
R329	1-216-833-11	RES, CHIP	10K	5%	1/16W
R330	1-216-833-11	RES, CHIP	10K	5%	1/16W
R331	1-216-833-11	RES, CHIP	10K	5%	1/16W
R332	1-216-833-11	RES, CHIP	10K	5%	1/16W
R337	1-216-809-11	METAL CHIP	100	5%	1/16W
R338	1-216-833-11	RES, CHIP	10K	5%	1/16W
R339	1-216-833-11	RES, CHIP	10K	5%	1/16W
R340	1-216-833-11	RES, CHIP	10K	5%	1/16W
R341	1-216-809-11	METAL CHIP	100	5%	1/16W
R403	1-216-833-11	RES, CHIP	10K	5%	1/16W
R404	1-216-864-11	METAL CHIP	0	5%	1/16W
R405	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R406	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R407	1-216-833-11	RES, CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R409	1-216-864-11	METAL CHIP	0	5%	1/16W
R410	1-216-821-11	METAL CHIP	1K	5%	1/16W
R411	1-216-833-11	RES, CHIP	10K	5%	1/16W
R412	1-216-809-11	METAL CHIP	100	5%	1/16W
R426	1-216-813-11	METAL CHIP	220	5%	1/16W
R427	1-216-813-11	METAL CHIP	220	5%	1/16W
R428	1-216-813-11	METAL CHIP	220	5%	1/16W
R429	1-216-813-11	METAL CHIP	220	5%	1/16W
R430	1-216-813-11	METAL CHIP	220	5%	1/16W
R431	1-216-813-11	METAL CHIP	220	5%	1/16W
R501	1-216-809-11	METAL CHIP	100	5%	1/16W (S725D)
R519	1-216-809-11	METAL CHIP	100	5%	1/16W
R520	1-216-833-11	RES, CHIP	10K	5%	1/16W
R521	1-216-833-11	RES, CHIP	10K	5%	1/16W
R522	1-216-833-11	RES, CHIP	10K	5%	1/16W
R527	1-216-833-11	RES, CHIP	10K	5%	1/16W
R528	1-216-833-11	RES, CHIP	10K	5%	1/16W
R530	1-216-864-11	METAL CHIP	0	5%	1/16W
R537	1-216-806-11	RES, CHIP	56	5%	1/16W
R539	1-216-864-11	METAL CHIP	0	5%	1/16W
R540	1-216-864-11	METAL CHIP	0	5%	1/16W
R541	1-216-864-11	METAL CHIP	0	5%	1/16W
R543	1-216-864-11	METAL CHIP	0	5%	1/16W
R544	1-216-864-11	METAL CHIP	0	5%	1/16W
R604	1-216-833-11	RES, CHIP	10K	5%	1/16W (S725D)
R605	1-216-833-11	RES, CHIP	10K	5%	1/16W
R606	1-216-833-11	RES, CHIP	10K	5%	1/16W
R630	1-216-833-11	RES, CHIP	10K	5%	1/16W
R631	1-216-833-11	RES, CHIP	10K	5%	1/16W
R632	1-216-833-11	RES, CHIP	10K	5%	1/16W
R633	1-216-833-11	RES, CHIP	10K	5%	1/16W
R634	1-216-833-11	RES, CHIP	10K	5%	1/16W
R635	1-216-833-11	RES, CHIP	10K	5%	1/16W
R636	1-216-815-11	METAL CHIP	330	5%	1/16W
R637	1-216-809-11	METAL CHIP	100	5%	1/16W
R638	1-216-809-11	METAL CHIP	100	5%	1/16W
R639	1-216-809-11	METAL CHIP	100	5%	1/16W
R640	1-216-809-11	METAL CHIP	100	5%	1/16W
R641	1-216-809-11	METAL CHIP	100	5%	1/16W
R642	1-216-809-11	METAL CHIP	100	5%	1/16W
R643	1-216-815-11	METAL CHIP	330	5%	1/16W
R647	1-216-833-11	RES, CHIP	10K	5%	1/16W
R701	1-216-805-11	METAL CHIP	47	5%	1/16W
R702	1-216-817-11	METAL CHIP	470	5%	1/16W
R703	1-216-817-11	METAL CHIP	470	5%	1/16W
R704	1-216-817-11	METAL CHIP	470	5%	1/16W
R705	1-216-817-11	METAL CHIP	470	5%	1/16W
R706	1-216-821-11	METAL CHIP	1K	5%	1/16W
R707	1-216-844-11	METAL CHIP	82K	5%	1/16W
R708	1-216-844-11	METAL CHIP	82K	5%	1/16W
R709	1-216-844-11	METAL CHIP	82K	5%	1/16W
R710	1-216-844-11	METAL CHIP	82K	5%	1/16W
R711	1-216-833-11	RES, CHIP	10K	5%	1/16W
R712	1-216-839-11	METAL CHIP	33K	5%	1/16W
R720	1-216-821-11	METAL CHIP	1K	5%	1/16W
R721	1-216-821-11	METAL CHIP	1K	5%	1/16W
R722	1-216-801-11	METAL CHIP	22	5%	1/16W
R748	1-216-833-11	RES, CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R751	1-216-821-11	METAL CHIP	1K	5%	1/16W
R752	1-216-821-11	METAL CHIP	1K	5%	1/16W
R755	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R757	1-216-864-11	METAL CHIP	0	5%	1/16W
R758	1-216-864-11	METAL CHIP	0	5%	1/16W
R801	1-216-841-11	METAL CHIP	47K	5%	1/16W
R802	1-216-841-11	METAL CHIP	47K	5%	1/16W
R803	1-216-841-11	METAL CHIP	47K	5%	1/16W
R804	1-216-841-11	METAL CHIP	47K	5%	1/16W
R805	1-216-840-11	METAL CHIP	39K	5%	1/16W
R806	1-216-840-11	METAL CHIP	39K	5%	1/16W
R807	1-216-835-11	METAL CHIP	15K	5%	1/16W
R808	1-216-835-11	METAL CHIP	15K	5%	1/16W
R809	1-216-844-11	METAL CHIP	82K	5%	1/16W
R810	1-216-844-11	METAL CHIP	82K	5%	1/16W
R811	1-218-907-11	RES, CHIP	330K	0.50%	1/16W
R812	1-218-895-11	RES, CHIP	100K	0.50%	1/16W
R813	1-218-895-11	RES, CHIP	100K	0.50%	1/16W
R814	1-218-907-11	RES, CHIP	330K	0.50%	1/16W
R815	1-216-836-11	METAL CHIP	18K	5%	1/16W
R816	1-216-845-11	METAL CHIP	100K	5%	1/16W
R817	1-216-852-11	METAL CHIP	390K	5%	1/16W
R818	1-216-852-11	METAL CHIP	390K	5%	1/16W
R819	1-216-849-11	METAL CHIP	220K	5%	1/16W
R820	1-216-851-11	METAL CHIP	330K	5%	1/16W
R821	1-216-840-11	METAL CHIP	39K	5%	1/16W
R822	1-216-845-11	METAL CHIP	100K	5%	1/16W
R823	1-216-833-11	RES, CHIP	10K	5%	1/16W
R824	1-216-833-11	RES, CHIP	10K	5%	1/16W
R825	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R826	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R827	1-216-851-11	METAL CHIP	330K	5%	1/16W
R828	1-216-837-11	METAL CHIP	22K	5%	1/16W
R829	1-216-837-11	METAL CHIP	22K	5%	1/16W
R831	1-216-833-11	RES, CHIP	10K	5%	1/16W
R832	1-216-833-11	RES, CHIP	10K	5%	1/16W
R834	1-216-847-11	METAL CHIP	150K	5%	1/16W
R835	1-216-847-11	METAL CHIP	150K	5%	1/16W
R836	1-216-847-11	METAL CHIP	150K	5%	1/16W
R837	1-216-844-11	METAL CHIP	82K	5%	1/16W
R838	1-216-848-11	METAL CHIP	180K	5%	1/16W
R839	1-216-848-11	METAL CHIP	180K	5%	1/16W
R840	1-216-848-11	METAL CHIP	180K	5%	1/16W
R841	1-216-843-11	METAL CHIP	68K	5%	1/16W
R842	1-216-844-11	METAL CHIP	82K	5%	1/16W
R843	1-216-844-11	METAL CHIP	82K	5%	1/16W
R844	1-216-843-11	METAL CHIP	68K	5%	1/16W
R845	1-216-843-11	METAL CHIP	68K	5%	1/16W
R846	1-216-841-11	METAL CHIP	47K	5%	1/16W
R847	1-216-296-91	SHORT	0		
R851	1-216-833-11	RES, CHIP	10K	5%	1/16W
R852	1-216-833-11	RES, CHIP	10K	5%	1/16W
R853	1-216-833-11	RES, CHIP	10K	5%	1/16W
R854	1-216-833-11	RES, CHIP	10K	5%	1/16W
R855	1-216-834-11	METAL CHIP	12K	5%	1/16W
R856	1-216-836-11	METAL CHIP	18K	5%	1/16W
R857	1-218-899-11	RES, CHIP	150K	0.50%	1/16W
R858	1-218-899-11	RES, CHIP	150K	0.50%	1/16W
R859	1-218-889-11	RES, CHIP	56K	0.50%	1/16W
R860	1-218-889-11	RES, CHIP	56K	0.50%	1/16W

	Ref. No.	Part No.	Description			Remark
	R861	1-216-296-91	SHORT	0		
	R864	1-216-138-00	METAL CHIP	3.3	5%	1/8W
	R865	1-216-833-11	RES, CHIP	10K	5%	1/16W
	R866	1-216-833-11	RES, CHIP	10K	5%	1/16W
	R867	1-216-833-11	RES, CHIP	10K	5%	1/16W
	R868	1-216-833-11	RES, CHIP	10K	5%	1/16W
	R869	1-216-833-11	RES, CHIP	10K	5%	1/16W
	R870	1-216-815-11	METAL CHIP	330	5%	1/16W
	R871	1-216-817-11	METAL CHIP	470	5%	1/16W
	R872	1-216-815-11	METAL CHIP	330	5%	1/16W
	R873	1-216-821-11	METAL CHIP	1K	5%	1/16W
	R909	1-216-809-11	METAL CHIP	100	5%	1/16W
	R912	1-216-809-11	METAL CHIP	100	5%	1/16W
	R915	1-216-809-11	METAL CHIP	100	5%	1/16W
	R918	1-216-809-11	METAL CHIP	100	5%	1/16W
			< COMPOSITION CIRCUIT BLOCK >			
*	RB201	1-233-270-11	NETWORK, RES (8 GANG) 10K			
*	RB202	1-233-270-11	NETWORK, RES (8 GANG) 10K			
*	RB203	1-233-270-11	NETWORK, RES (8 GANG) 10K			
*	RB204	1-233-270-11	NETWORK, RES (8 GANG) 10K			
*	RB402	1-233-270-11	NETWORK, RES (8 GANG) 10K (S525D)			
*	RB601	1-233-270-11	NETWORK, RES (8 GANG) 10K			
			< VARIABLE RESISTOR >			
	RV401	1-223-583-11	RES, ADJ, CARBON 1K			
			< VIBRATOR >			
	X001	1-781-188-21	OSCILLATOR, CRYSTAL (27MHz)			
	X201	1-781-185-21	VIBRATOR, CERAMIC (12.5MHz)			

	Ref. No.	Part No.	Description			Remark
*		A-6066-012-A	MS-29 BOARD, COMPLETE **********************			
						(Ref. No. 3,000 Series)
			< CONNECTOR >			
	CN001	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
			< SWITCH >			
	S001	1-771-562-11	SWITCH, LEVER (TRAY SENSOR)			
	S002	1-762-386-11	SWITCH, PUSH (CHUCK SENSOR)			

	Ref. No.	Part No.	Description			Remark
*		1-468-359-11	POWER BLOCK (HS-030SH) **********************			
						(Ref.No. 6,000 Series)
			< CAPACITOR >			
	C110	9-884-088-01	ELECT	56uF		400V
	C131	1-126-964-11	ELECT	10uF		50V
	C132	1-126-960-11	ELECT	1uF		50V
	C186	1-107-967-11	ELECT	1uF		400V
	C211	1-111-087-11	ELECT	330uF		35V
	C213	1-126-947-11	ELECT	47uF		35V
	C301	1-126-960-11	ELECT	1uF		50V
	C311	1-111-087-11	ELECT	330uF		35V
	C313	1-126-947-11	ELECT	47uF		35V
	C401	1-126-948-11	ELECT	100uF		35V
	C402	1-126-960-11	ELECT	1uF		50V
	C511	1-126-942-11	ELECT	1000uF		25V
	C512	1-126-947-11	ELECT	47uF		35V
	C611	1-111-090-11	ELECT	560uF		35V
	C613	1-126-947-11	ELECT	47uF		35V
			< DIODE >			
	D101	9-884-089-01	DIODE S1WBA60			
	D102	8-719-160-68	DIODE RD18FB2			
	D104	8-719-109-57	DIODE RD2.4ESB2			
	D105	9-980-073-01	DIODE 1SS270A			
	D131	9-980-073-01	DIODE 1SS270A			
	D132	9-980-073-01	DIODE 1SS270A			
	D133	8-719-109-60	DIODE RD2.7ESB2			
	D135	9-980-073-01	DIODE 1SS270A			
	D182	8-719-109-60	DIODE RD2.7ESB2			
	D183	9-980-073-01	DIODE 1SS270A			
	D184	9-880-435-01	DIODE D1N60			
	D185	8-719-160-68	DIODE RD18FB2			
	D211	8-719-027-43	DIODE S2L20U			
	D212	8-719-160-78	DIODE RD24FB2			
	D311	8-719-200-59	DIODE 21DQ04			
	D401	8-719-210-21	DIODE 11EQS04			
	D402	8-719-110-02	DIODE RD7.5ESB1			
	D511	8-719-027-43	DIODE S2L20U			
	D611	8-719-500-50	DIODE D3S4M			
			< FUSE >			
⚠	F101	1-532-503-31	FUSE (1.6A/250V)			
			< IC >			
	IC301	8-759-420-19	IC AN1431T			
	IC401	8-759-420-19	IC AN1431T			
			< IC LINK >			
⚠	P211	1-533-588-11	IC LINK 500mA			
⚠	P311	1-533-593-11	IC LINK 2A			
⚠	P511	1-533-589-11	IC LINK 750mA			
⚠	P611	9-884-090-01	IC LINK 1.5A			
			< PHOTO COUPLER >			
⚠	PC101	8-749-010-59	PHOTO COUPLER TLP721F			
⚠	PC102	8-749-010-59	PHOTO COUPLER TLP721F			
⚠	PC103	8-749-010-59	PHOTO COUPLER TLP721F			
			< TRANSISTOR >			
	Q101	9-880-450-01	TRANSISTOR 2SK2333			
	Q102	8-729-023-98	TRANSISTOR 2SC3377			
	Q103	9-880-450-01	TRANSISTOR 2SK2333			
	Q131	8-729-023-98	TRANSISTOR 2SC3377			
	Q181	8-729-046-40	TRANSISTOR 2SK2663			
	Q182	8-729-023-98	TRANSISTOR 2SC3377			
	Q183	8-729-046-40	TRANSISTOR 2SK2663			
			< RESISTOR >			
	R152	1-219-121-21	FUSIBLE	0.22		1/4W F

Ref. No.	Part No.	Description			Remark
*	A-6065-255-A	RY-12 BOARD, COMPLETE (S725D)			
		***********************			
		(Ref. No. 2,000 Series)			
		< CONNECTOR >			
* CN101	1-580-230-21	PIN, CONNECTOR (PC BOARD) 2P			
* CN201	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN202	1-564-001-11	PIN, CONNECTOR 2P			
		< DIODE >			
D101	8-719-911-19	DIODE 1SS119			
		< RELAY >			
⚠RY101	1-755-318-11	RELAY, POWER			
*	A-6065-230-A	SW-314 BOARD, COMPLETE (S525D)			
*	A-6065-253-A	SW-316 BOARD, COMPLETE (S725D)			
		***********************			
		(Ref. No. 4,000 Series)			
		< CONNECTOR >			
CN099	1-785-539-21	CONNECTOR, BOARD TO BOARD 4P			
		< DIODE >			
D098	8-719-056-06	DIODE SLR-342DCT31 (VES) (S525D)			
D098	8-719-056-06	DIODE SLR-342DCT31 (VIRTUAL 3D SURROUND) (S725D)			
		< TRANSISTOR >			
Q098	8-729-421-22	TRANSISTOR UN2211			
		< RESISTOR >			
R098	1-216-041-00	METAL CHIP	470	5%	1/10W
		< SWITCH >			
S098	1-771-349-21	SWITCH, KEYBOARD (VES) (S525D)			
S098	1-771-349-21	SWITCH, KEYBOARD (VIRTUAL 3D SURROUND) (S725D)			
*	A-6065-256-A	TK-54 BOARD, COMPLETE			
		**********************			
		(Ref. No. 2,000 Series)			
		< CAPACITOR >			
C004	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C005	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C006	1-124-779-00	ELECT CHIP	10uF	20%	16V
C007	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C009	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C010	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C011	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C012	1-124-779-00	ELECT CHIP	10uF	20%	16V
C013	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C014	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C015	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C016	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C017	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C018	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C019	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C020	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C021	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C022	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C023	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C024	1-164-730-11	CERAMIC CHIP	0.0012uF	10%	50V
C025	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C026	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C027	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C028	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C029	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C030	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C031	1-124-779-00	ELECT CHIP	10uF	20%	16V
C032	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C033	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C034	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C035	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C036	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C037	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C038	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C039	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C040	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C041	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
		< CONNECTOR >			
CN001	1-785-700-21	CONNECTOR, FFC/FPC (ZIF) 23P			
CN002	1-566-529-11	CONNECTOR, FPC (ZIF) 13P			
CN003	1-785-699-21	CONNECTOR, FFC/FPC 18P			
CN004	1-785-699-21	CONNECTOR, FFC/FPC 18P			
		< DIODE >			
D003	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC001	8-759-567-24	IC SSI33P3722			
		< COIL >			
L001	1-412-031-11	INDUCTOR CHIP 47uH			
		< TRANSISTOR >			
Q001	8-729-903-46	TRANSISTOR 2SB1132-T100-QR			
Q002	8-729-015-76	TRANSISTOR UN5211-TX			
		< RESISTOR >			
R001	1-216-815-11	METAL CHIP	330	5%	1/16W
R002	1-216-809-11	METAL CHIP	100	5%	1/16W
R003	1-216-809-11	METAL CHIP	100	5%	1/16W
R004	1-216-837-11	METAL CHIP	22K	5%	1/16W
R005	1-216-013-00	METAL CHIP	33	5%	1/10W
R006	1-216-013-00	METAL CHIP	33	5%	1/10W
R007	1-216-841-11	METAL CHIP	47K	5%	1/16W
R008	1-216-797-11	METAL CHIP	10	5%	1/16W
R009	1-216-834-11	METAL CHIP	12K	5%	1/16W
R010	1-216-833-11	RES, CHIP	10K	5%	1/16W
R012	1-216-864-11	METAL CHIP	0	5%	1/16W
R014	1-216-864-11	METAL CHIP	0	5%	1/16W
R015	1-216-833-11	RES, CHIP	10K	5%	1/16W
R016	1-216-833-11	RES, CHIP	10K	5%	1/16W
R017	1-216-829-11	METAL CHIP	4.7K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R018	1-216-833-11	RES, CHIP	10K	5%	1/16W
R022	1-216-811-11	METAL CHIP	150	5%	1/16W
R023	1-216-820-11	METAL CHIP	820	5%	1/16W
R025	1-216-813-11	METAL CHIP	220	5%	1/16W
R026	1-216-864-11	METAL CHIP	0	5%	1/16W
R029	1-216-861-11	METAL CHIP	2.2M	5%	1/16W

MISCELLANEOUS
****

Ref. No.	Part No.	Description
115	1-418-097-11	ENCODER, ROTARY
127	1-790-167-11	CABLE, FLEXIBLE FLAT (FMF-35)
153	1-790-166-11	CABLE, FLEXIBLE FLAT (FMT-25)
154	1-790-163-11	CABLE, FLEXIBLE FLAT (FMA-7)
155	1-790-164-11	CABLE, FLEXIBLE FLAT (FMA-8)
156	1-790-165-11	CABLE, FLEXIBLE FLAT (FMA-9)
⚠161	1-769-744-91	CORD, POWER
166	1-790-168-11	CABLE, FLEXIBLE FLAT (FEA-4) (S725D)
166	1-790-408-11	CABLE, FLEXIBLE FLAT (FME-4) (S525D)
⚠220	8-820-081-03	OPTICAL PICK-UP KHM-220AAA/J1RP
M001	1-541-632-11	MOTOR, DC (LOADING)
⚠T901	1-431-175-21	TRANSFORMER, POWER (S725D)

****
HARDWARE LIST
****

Ref. No.	Part No.	Description
#1	7-685-885-09	SCREW +BVTT 4X16 (S) (S725D)
#2	7-621-775-10	SCREW +B 2.6X4
#3	7-685-136-19	SCREW +BTP 2.6X12 TYPE2 N-S

ACCESSORIES & PACKING MATERIALS
****

Part No.	Description
1-418-320-31	COMMANDER, STANDARD (RMT-D108P) (S525D)
1-418-321-31	COMMANDER, STANDARD (RMT-D111P) (S725D)
1-575-334-11	CORD, CONNECTION (STEREO AV CABLE 1.5m) (S525D)
1-575-334-41	CORD, CONNECTION (STEREO AV CABLE 1.5m) (S725D)
1-575-335-21	CORD, CONNECTION (S-VIDEO CABLE 1.5m) (S525D)
1-776-078-31	CORD, CONNECTION (S-VIDEO CABLE 1.5m) (S725D)
3-053-633-01	COVER, BATTERY (for RMT-D108P) (S525D)
3-055-539-01	COVER, BATTERY (for RMT-D111P) (S725D)
3-865-642-41	MANUAL, INSTRUCTION (ENGLISH) (S525D)
3-865-642-51	MANUAL, INSTRUCTION (FRENCH, GERMAN) (S525D)
3-865-642-61	MANUAL, INSTRUCTION (ITALIAN, DUTCH) (S525D)
3-866-153-21	MANUAL, INSTRUCTION (ENGLISH) (S725D)
3-866-153-31	MANUAL, INSTRUCTION (FRENCH, GERMAN) (S725D)
3-866-153-41	MANUAL, INSTRUCTION (ITALIAN, DUTCH) (S725D)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-921-738-11

Sony Corporation
Home Video Company

99H0504-1D
Printed in Japan © 1999. 8
Published by Quality Assurance Dept.